

Chapter 8: Recreation and Tourism

1 Overview and Key Findings

- Recreation is an integral part of the Delta, complementing its multiple resources and contributing to the economic vitality of the region. Residents of nearby areas visit virtually every day, generating a total of roughly 12 million visitor days of use annually and a direct economic impact of more than a quarter of a billion dollars in spending.
- The Sacramento-San Joaquin Delta is an area where a diversity of recreation experiences is evident, from boating in open water or through winding tree-covered channels, to hunting or wildlife viewing, studying local California history, or tasting award-winning local wines.
- Several physical and operational constraints have an impact on current facilities and recreation access, including sediment accumulation, water gates, screens, and barriers, invasive species, waterway obstructions, water quality, lack of boat-in destinations and access points, user group conflicts, private land trespass, and complex regulations.
- While a percentage of visitors to the Delta come from elsewhere, the majority of visitors are from Northern California. These visitors represent the focal market for Delta recreation growth opportunities in the future, and their places of origin define the Market Area for this study. The total Market Area had a population estimate of approximately 11.9 million in 2010, with projections of 17.6 million by 2050.
- Recreation visitation for 2010 is estimated to be approximately 8 million *resource-related* (e.g., boating and fishing) visitor days of use per year, 2 million *urban parks-related* (e.g., golf, picnic, and turf sports), and 2 million *right-of-way-related* (e.g., bicycling and driving for pleasure) recreation visitors/year. The total number of activity days is conservatively estimated at approximately 12 million/year.¹²⁸
- An up-to-date visitor survey with new primary data, particularly on non-boating and non-fishing recreation, is needed to better document existing recreation visitation and spending.
- Employment within the Primary Zone in recreation-related economic sectors—including marinas, water craft rental, boat dealers, and boat building and repair—has been relatively flat over the past 20 years.
- The principle changes and trends that could affect the present recreation use and demand over the next 50–90 years are: physical changes to the Delta due to water conveyance management changes and rising sea levels, increasing population and development growth, increasing agritourism, non-consumptive resources-based recreation, habitat-related recreation, and the likely desire for closer-to-home recreation.
- The current direct spending in the Delta region from *resource-related* and *right-of-way/tourism-related* trips and related non-trip spending is estimated at roughly \$312 million inside the Delta (in 2011 dollars). Additional economic impacts associated with urban recreation are not quantified, but are likely significant.
- Delta recreation and tourism supports over 3,000 jobs in the five Delta counties. These jobs provide about \$100 million in labor income and a total of \$175 million in value added to the regional economy.
- Delta recreation and tourism supports over 5,200 jobs across all of California, and contributes about \$348 million in value added.

¹²⁸ Estimates are based on limited data combined with professional judgment.

- State Parks' *Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh* offers a strong framework for needs and opportunities for the provision of recreation and tourism in the Delta by state agencies.
- When attracting visitors and expanding recreation access to waterways and landside recreation improvements, potential negative impacts on agriculture from increased tourism and recreation can be minimized by focusing recreation uses and activities through expansion of existing recreation sites, development in Legacy Communities, creating buffer areas adjacent to agriculture, and increasing public safety enforcement.
- Growth of recreation in the Delta can be fostered through five location-based strategies, which would emphasize increased public access and related private development:
 - Delta waterways, specialized by boating type;
 - Dispersed, small points of interest and activity areas such as marinas, farmer's markets, wineries, restaurants;
 - Focal point complexes such as Legacy Communities or Bethel Island/Jersey Island/Big Break;
 - Natural habitat areas; and
 - The edges of existing and emerging urban areas that surround the Delta such as Stockton, Tracy, Rio Vista, and Lathrop.
- If resource quality and recreational facilities are maintained such that the Delta retains its current level of competitiveness as a recreation destination, baseline forecasts for visitation show increases of 3.4 million visitor days, or about 35 percent, over 40 years. If this Plan is implemented, recreation visitation in the Delta (including resource-related recreation, right-of-way recreation, and tourism) would increase over baseline.
- Assuming that current visitor spending patterns remain unchanged and Delta business growth accommodates recreation-related spending increases, baseline visitation growth is estimated to increase spending in the Delta roughly \$78 million (2011\$) to about \$329 million (2011\$) by 2050. Plan implementation could increase the economic impact of recreation over the baseline.
- Possible policy scenarios are qualitatively evaluated as to their primary elements and their potential positive and negative impacts on recreation.
 - Scenarios evaluated may affect recreation visitation by either decreasing visitation or increasing visitation over the baseline scenario, with the expected largest potential for negative impacts from increased regulatory changes or the six-island flooding and the largest potential for positive impacts from the habitat conservation scenario.
 - Visitation changes would also affect recreation-related spending in the Delta, as compared with the baseline forecast. It is anticipated that the magnitude of these potential changes is smaller in magnitude than the potential economic impacts to the agricultural economy.
 - The largest anticipated potential negative impacts would result from regulation changes, six-island flooding, salinity increases in the central and south Delta, large tidal marsh creation in the south Delta, and intake and pumping stations near Clarksburg and Courtland.
 - Positive impacts could result overall through project enhancements to fishing, wildlife viewing and nature study, and Delta-as-a-Place.
- A significant operational constraint for future growth in recreation demand is that there currently exists no Delta brand, overall marketing strategy, or significant-scale focal point area. An existing organization should be designated as a Delta recreation and tourism marketing and economic development facilitator.

- Recommended Implementation Strategies include consistency planning and regulation refinement, public/private coordination and partnerships, multi-agency coordination, strategic levee protection, Delta-wide marketing, and financing.

2 Introduction

The Delta is a significant natural place in California—a mixture of meandering rivers, sloughs, back bays, shipping channels, small communities, historic sites, and agricultural islands with farm markets and wineries. It is a vast area, covering over half a million acres, with about 60 larger tracts and islands and over 650 linear miles of waterways and channels.

The Delta links California's Central Valley with the San Francisco Bay. It is surrounded by cities (some of which have historic roots) and urbanizing areas at the edge of the Delta, and its two primary rivers, the Sacramento and the San Joaquin.

Approximately 12 million people live within close proximity of the Delta, yet most do not see it as a vital water source for the state, as a rich biological resource, or as an important agricultural production area, although it is all of these. For most, the Delta is best known for the recreation opportunities found there.

The Delta gives visitors a place to slow down and relax, to taste earth's bounty, and to leave the urban areas behind. It is called California's boating paradise, and is one of the state's most important fishing and waterfowl hunting resources, a place with natural habitats for bird watching and nature study, and a scenic place to meander and explore by boat or car.

Recreation is an integral part of the Delta, complementing its multiple resources and contributing to the economic vitality and livability of the region. Residents of nearby areas visit virtually every day, generating a total of roughly 12 million visitor days of use annually and a direct economic impact of more than a quarter of a billion dollars in spending.

3 Current Status and Trends

3.1 Understanding 'Delta as a Place' Today

The Delta is difficult to characterize as both a region and, likewise, a recreation destination. Unlike well-known water recreation destinations such as Lake Tahoe or Shasta Lake, the Delta is not a single entity and cannot easily be conceived in its entirety. It has highly varied physical attributes and covers a vast and varied landscape that can be viewed and accessed from activity points that are so disparate, it is possible to repeatedly visit the Delta and still have little understanding of exactly what the Delta is or how large it is.

Extending more than 50 miles from north to south, the Delta is sometimes centered on a wide river, though more often it is a network of narrow channels, sloughs, and islands. It presents itself from two distinct vantage points, each of which represents a completely different character. One view is from the water, where the landscape typically lies, unseen, behind tall levees and riparian vegetation, with only distant mountains visible. From the perspective of thicket-edged sloughs, narrow rock-faced channels, or spreading, open waterways, there is little landside context. The other view of the Delta, the landside perspective, largely precludes the water environment, which can be glimpsed primarily from levee-top roads and bridges. The predominant visual character landside is the agricultural landscape, which is as varied as the waterscape hidden on the other side of the levees.

This setting creates a place of paradox; it is a region that can be unapproachable and unapparent to visitors. For those who do not already know and visit the Delta, it can be a place that exists in name alone. Many people drive through the Delta without a clear sense of being in it and less notion of where it begins and where it ends.

Defining the Delta for visitors and recreation users is a necessary and yet difficult task. Because of the scope of the disparate environment, recreation destinations appear as a network of smaller recreation locations, each one suited to a different type of activity. To windsurfers, the open and windy waters of the larger channels flowing along the western side of Sherman Island might define the Delta. Sailors coming up from San Francisco Bay would define the Delta as offering protected deeper channels and coves. Water skiers and wake boarders might define the Delta by its protected narrower and straighter channels to the south, near Discovery Bay. Fishermen will be attracted to other aspects of the Delta, with differing characteristics, as varied as the fish they are seeking. So, too, kayakers, canoeists, pleasure cruisers, house-boaters, birders, hunters, and others, each seeking an aspect of the Delta specific to their interests and pursuits, will define the Delta in their own specific terms.

Recreationists from the landside may see a completely different Delta. Shoreline fishermen share the environment seen by those on the water and from the few recreation sites on land such as campgrounds and picnic areas. Hunters working fields and the edges of sloughs might never see open waterways as they seek game. For the vast majority of visitors to the Delta who never reach the water's edge, the landscape will be essentially one of agricultural fields, levee roads with river views, wineries and produce outlets, and sometimes, a Legacy Community's historical or cultural landmarks.

3.2 Existing Physical Conditions

3.2.1 Resource and Facility Analysis

3.2.1.1 Existing Facilities

In the Delta, people seeking recreation experiences primarily go to private enterprises, including marinas, restaurants, retail establishments, wineries, and farm stands. Public recreation facilities exist, but they are limited and many are natural resources-based, restricted-use areas such as the Department of Fish and Game's Wildlife Areas and Stone Lakes National Wildlife Refuge. Private nonprofit organizations such as The Nature Conservancy, Yolo Basin Foundation, and Solano Land Trust also provide recreation opportunities, which generally are related to habitat areas.

3.2.1.2 Private Facilities

Marinas are a common Delta access point for water recreation. Of the 95 marinas surveyed in 2001 as part of *The 2002 Sacramento-San Joaquin Delta Boating Needs Assessment*,¹²⁹ 92 were private and three were public facilities. Of the 92 private facilities, 87 were open to the public and five were private membership-based yacht clubs. These 92 private marinas provided a number of facilities to the Delta boater, including boat slips, launch ramps, parking, restrooms, restaurants, picnic facilities, camping sites, pumpouts, used oil collection centers, recycling centers, and fuel stations. Current data regarding business establishments in the Delta indicate that the number of marinas has not changed significantly since the early 2000s. Figure 27 provides a map of recreation zones and Figure 28 shows recreation facilities. Table 25

¹²⁹ DBW 2002

summarizes all facilities, as of 2002, by recreation zone with additional information about these zones.

Table 25 Summary of Facilities and Resources by Recreation Zone

	Recreation Zones						
	Northern Delta Gateway (North)	Bypass (Northwest)	Delta Hub (Central)	Delta Breezeway (West)	San Joaquin Delta Corridor (East)	Southern Delta Reaches (South)	Total
Linear Miles of Contiguous Waterways	61	58	132	152	122	110	635
Number of Marinas	8	1	12	56	13	5	95
Boat Slips	988	76	1,271	5,990	2,786	563	11,674
Transient Tie-Ups	20	18	69	115	69	18	309
Launch Ramps	3	1	9	27	11	4	55
Marina Parking Spaces	522	38	918	4,826	1,989	432	8,725
Day-Use Picnic Sites	40	0	52	183	26	23	324
Camp/RV Sites	54	0	247	1,501	327	53	2,182
Fuel Stations ¹³⁰	3	0	7	28	12	6	56
Source: DBW 2002, Table 2-1, Page 2-5							

The Delta's other major private recreation facilities are the numerous private hunting clubs, which typically are associated with agricultural lands. Very little information exists on the number of these facilities or the number of hunters who utilize them. In a 1997 survey, the Delta Protection Commission identified 23 private hunting facilities, most in Yolo County. Conversations with hunters indicate that many additional formal and informal hunting clubs are located throughout the Delta.

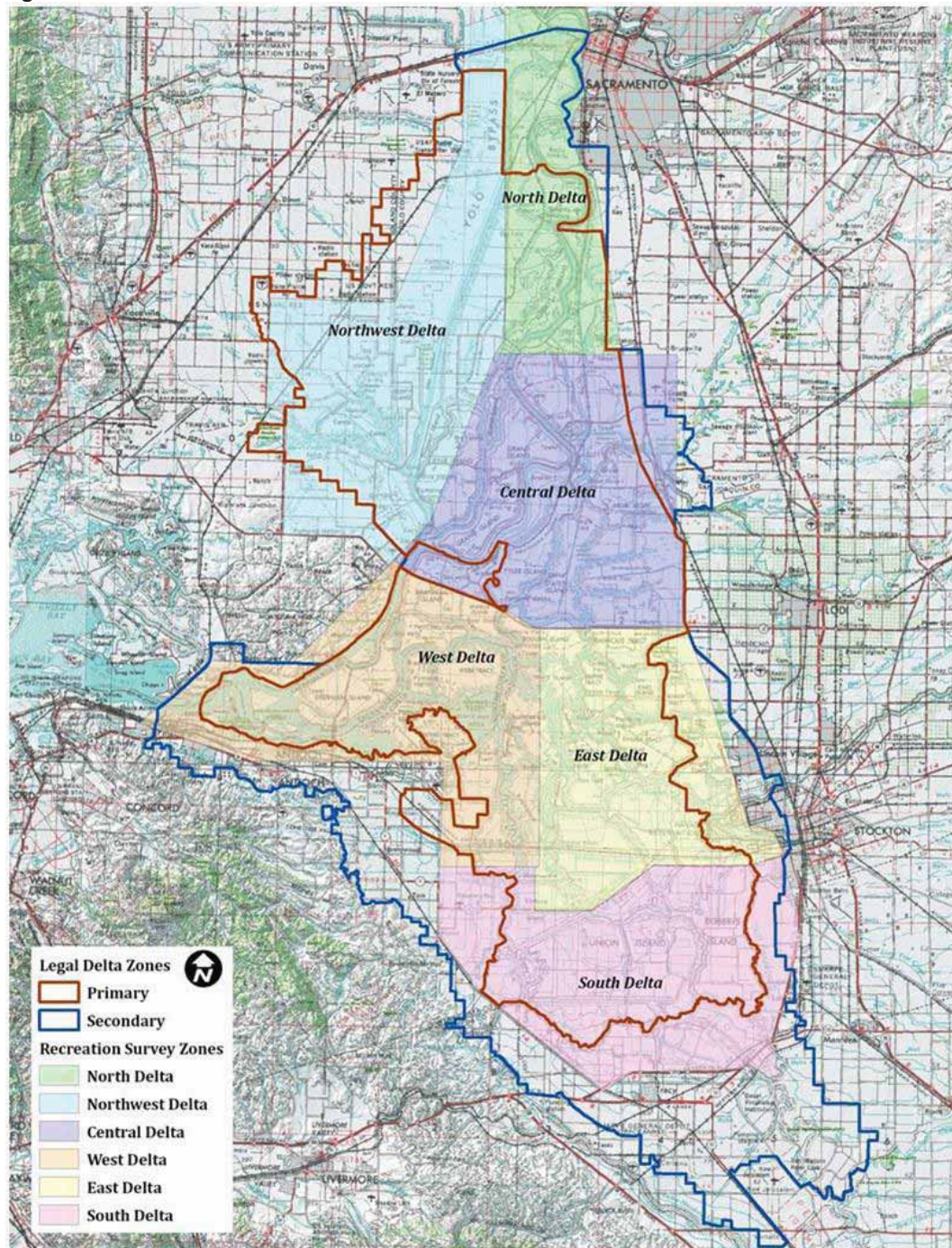
Private nonprofit organizations such as The Nature Conservancy and the Solano Land Trust also provide for some public recreation on facilities that they manage. The Cosumnes River Preserve includes lands owned by both public and not-for-profit organizations such as Bureau of Land Management, Department of Fish and Game (DFG), Department of Water Resources (DWR), The Nature Conservancy (TNC), Ducks Unlimited, Sacramento County, and the State Lands Commission. The preserve has a visitor center with picnic areas, interpretive displays,

¹³⁰ A phone and internet survey was completed as part of this project to update the total number of marinas, camping facilities, fuel stations, and other facility numbers. Section 3.2.1.4 and Appendix I include details about those facility numbers. However, the numbers in Table 25 are left as is, as those were taken directly from the DBW 2002 survey, still provide a general magnitude of totals, are broken down by recreation zones, and all numbers have not been updated.

restrooms, and three designated hiking trails and allows bird watching, photography, hiking, and paddling.

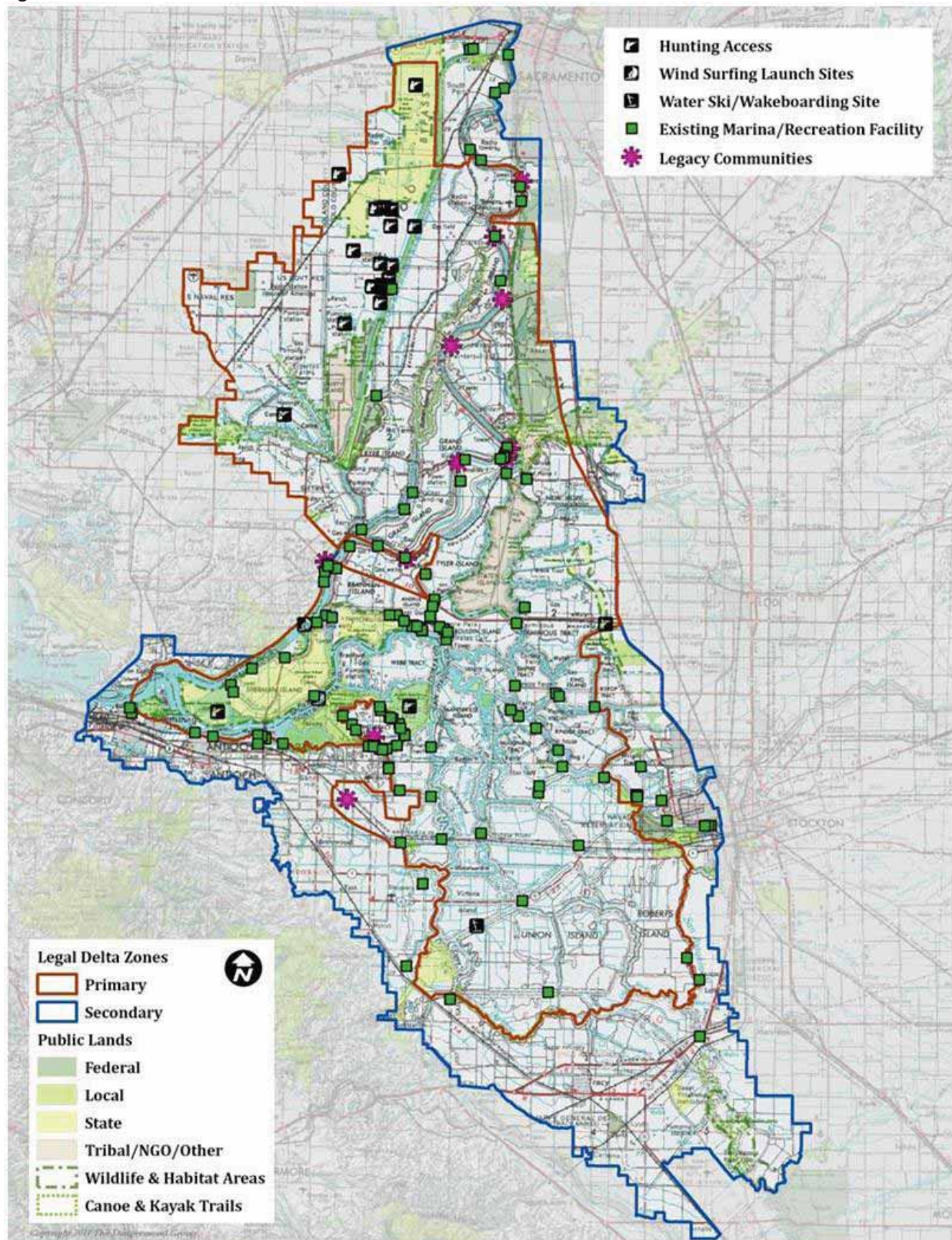
Additional private facilities include those catering to Delta-as-a-Place recreationists and tourists, including restaurants, agricultural stands, and wineries. A recent study found 25 attractions/historic places, 17 farmers markets, and nine wineries/tasting rooms (Figure 29).

Figure 27 Delta Recreation Zones¹³¹



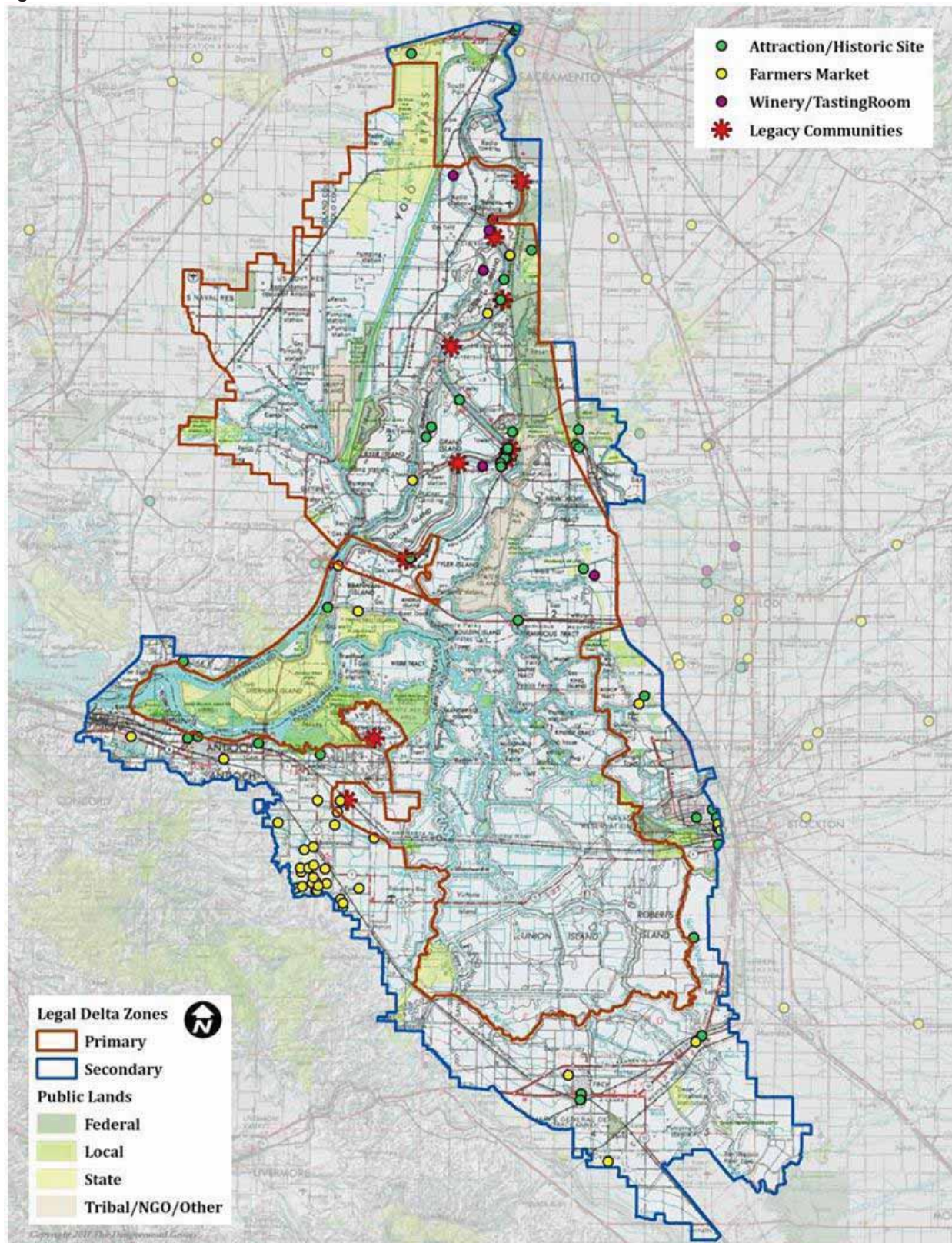
¹³¹ For high resolution image see <http://forecast.pacific.edu/desp-figs.html>

Figure 28 Delta Recreation Facilities¹³²



¹³² For high resolution image see <http://forecast.pacific.edu/desp-figs.html>

Figure 29 Delta Tourism Facilities¹³³



¹³³ For high resolution image see <http://forecast.pacific.edu/desp-figs.html>

3.2.1.3 Public Facilities

There are a number of publicly-owned lands in the Delta, covering almost 40,000 acres. A percentage of these lands is open to public recreation access, including hiking, day use, fishing, hunting, and wildlife viewing. Stone Lakes National Wildlife Refuge is the largest public facility, with 6,200 service-managed acres within its 18,000-acre boundary, but provides limited public access in the form of waterfowl hunting, guided hikes, special events, bird watching, and canoe/kayak tours. Stone Lakes is in the process of opening a new trails and visitor facility, the Blue Heron Trails Visitor Contact Station, which will feature a universally accessible trail, interpretation, an unstructured play area, restroom, and outdoor amphitheater. It is scheduled to open in November 2011.

Brannon Island State Recreation Area provides some of the best public facilities in the Delta, including three group picnic sites, 300 general picnic sites, 78 miles of non-motorized trails, grassy areas, a campground with 102 developed sites, six group camping sites, a boat launch ramp, sewage/bilge pumpouts, non-motorized boat access, a swimming area, and berths and tie-ups for transient boats.^{134,135} The Department of Fish and Game owns and manages a number of Wildlife Areas, including Acker Island, Lower Sherman Island, Sherman Island, Woodbridge Ecological Reserve, and Yolo Bypass Wildlife Area. These facilities provide for a variety of activities, from bird watching tours to hunting, fishing, wildlife viewing, and education.

A number of public access trails exist or are in development, including the American Discovery Trail, Mokelumne Coast-to-Crest Trail, and the Great Delta Trail. These trails currently support or will provide public access for a variety of recreation activities, including hiking and biking. Additionally, State Highway 160 is a designated State Scenic Highway. A number of water trails have also been proposed.

There are also a number of local and regional parks within the Delta, including those provided by the cities of Tracy, Stockton, and Lathrop, the counties of Sacramento, San Joaquin, and Yolo, and regional providers such as East Bay Regional Parks District. These parks and facilities include Antioch Marina, Antioch Public Boat Ramp, Big Break Regional Shoreline, Garcia Bend Park Launch Ramp, Louis Park Boat Launching Facility, Morelli Park Boat Launching Facility, Sandy Beach Park and Boat Launch Facility, Hogback Island Access, and Sherman Island Public Access Facility. Figure 28 above shows some of these public facilities.

3.2.1.4 Recreation Enterprises in the Delta

A variety of data on business enterprises in the Delta describe economic activity attributable to recreation and tourism. As seen in Table 26 below, nearly 100 business enterprises within the Primary Zone are recreation-related. In the Secondary Zone, there are nearly 1,500 recreation-related enterprises, though many businesses likely provide for broad urban and non-local recreation opportunities in addition to serving Delta recreation.

¹³⁴ State Parks 2010, p. 20-21.

¹³⁵ This site is on the State Parks closure list and may be closed to public access as of July 1, 2012.

Table 26 Data for Recreation-Related Enterprises within the Legal Delta in 2008¹³⁶

Industry	Primary Zone Number of Establishments	Secondary Zone Number of Establishments
Boat Building	1	19
Recreational Vehicle Dealers	0	4
Boat Dealers	8	30
Scenic and Sightseeing	0	2
Performing Arts, Spectator Sports, and Related Industries	4	208
Museums, Historical Sites, and Similar Institutions	1	16
Amusement, Gambling, and Recreation Industries (including marinas)	34	255
Accommodation	22	148
Food Services and Drinking Places	26	778
Total	96	1,460
Source: NETS; UOP		

Many enterprises within the Delta, especially the marinas, offer more than one service. The chart above lists enterprises based on their primary business classification and the numbers may undercount certain services. For instance, several marinas also have restaurants, campgrounds, and a convenience store, provide boat repair services, and have fuel docks. In order to provide a picture of the facilities and services that are offered by enterprises within the Delta, further research was done of individual establishments, as detailed in Appendix I. Through this process, the following facilities or services were identified.¹³⁷

Table 27 Businesses Offering Recreation-Related Facilities and Services within the Delta

	Number of Facilities or Services
Marinas	112
Camping/RV Facilities	64
Restaurants ¹³⁸	81
Fuel Docks	45
Boat Builders	16
Boat Dealers	35
Boat Repair Facilities	49
Source: NETS, UOP	

Within the recreation-related businesses, the detail for “Accommodations” was further expanded and is presented in Table 27. There are very few choices for recreation travelers for overnight accommodation within the Primary Zone. The only establishment that provides rooms within the Primary Zone is the Ryde Hotel. There are a number of additional hotels, motels, and bed and breakfasts within the Secondary Zone; however, they seem to primarily cater to travelers

¹³⁶ Boat repair services were also examined. In total there are 37 establishments offering boat repair services - five in the primary zone and 32 in the secondary zone. These establishments are included in Table 27 under Marinas, Boat Dealers and Boat Builders.

¹³⁷ Note that numbers between Tables 26 and 27 cannot be directly compared as Table 26 lists each individual business only once, while Table 27 may count the same business multiple times if it provides multiple services.

¹³⁸ Restaurants listed here include those associated with marinas, in the Primary Zone, or located in Legacy Communities.

through the area, rather than Delta recreationists. Also, as listed above in Table 25, there are approximately 2,100 campsites within the Delta.

Table 28 Accommodations within the Delta (excluding campsites)

	Hotels, Motels, and B&Bs	
	Number of Establishments	Number of Rooms
Primary Zone	1	32
Isleton and Rio Vista	4	56
Secondary Zone	70	4,451
Delta Total	75	4,539
Note: There are also 84 small cabins available for rent in campgrounds, and 31 additional rooms available for special events, primarily weddings at Grand Island Mansion.		
Source: NETS, UOP		

3.2.1.5 Physical Constraints

There are several physical constraints related to Delta recreation which are detailed in *The Aquatic Recreation Component of the Delta Recreation Strategy Plan*.¹³⁹ The following constraints have an impact on current facilities and recreation access and are described in more detail below.

- Sediment accumulation in channels and waterways/shallow water
- Water gates, screens, and barriers
- Invasive aquatic vegetation that congests waterways, negatively affects water quality, destroys wildlife habitat, and clogs water supply pumps
- Waterway obstructions such as snags, submerged debris, abandoned vessels, and floating objects
- Water quality
- Lack of boating destinations, particularly beach frontages
- Highly sensitive habitat areas which restrict public access
- User group conflicts
- Private lands and agriculture-recreation conflicts
- Lack of fishing access from the shore and boat launches
- Water management, regulation, and other issues

Sediment Accumulation in Channels, Waterways, and Marinas

Sediment deposits and siltation affect both Delta waterways and marinas. For instance, silt can accumulate from three to eight feet in a given year at marina facilities along the Sacramento River. Sedimentation has led to the closure of marinas and boating facilities in severely-clogged channels.

The stringent regulations and lengthy, complex permit requirements for dredging silt out of channels and marinas burdens marina owners and boating facility operators. Marina operators have stated that dredging-related regulations should be streamlined or better coordinated among regulatory agencies to provide marina owners more flexibility in the removal of silt materials. In addition, channel dredging for levee maintenance is currently being slowed by the same regulation/permitting constraints.

¹³⁹ DPC 2006, pp. 56-69

The U.S. Army Corps of Engineers is spearheading a multiple-agency process called the Delta Dredged Sediment Long-Term Management Strategy (LTMS)¹⁴⁰ that aims to, among other goals, clarify the permitting process relative to Delta dredging and reuse projects. They are working to create an effective multi-agency task force called the Delta Dredging and Reuse Management Team (DDRMT), similar to the inter-agency Dredge Material Management Office (DMMO) which exists in San Francisco Bay. They are also working on drafting a Joint Permit Application.¹⁴¹

Water Gates, Screens, and Barriers

The Delta Cross Channel and gates, located in Walnut Grove, is an important link for recreational boaters. Although originally built just for water management, it allows, when open, for direct access to some of the most popular boating areas in the Delta. In recent years, it has been open most days per year, but operation periods are variable and boaters typically do not know in advance whether it will be open or not. In addition, its dimensions do not allow for use by larger boats or sailboats.

Other gates, screens, and barriers that exist throughout the Delta include Montezuma Slough Salinity Gates, South Delta Temporary Barriers (operated by DWR), and a wide variety of bridges and drawbridges. The proposed Two-Gates project has been developed by the U.S. Bureau of Reclamation and the Department of Water Resources. This project would install gates on Old River and Connection Slough in order to manipulate the flow of turbid water to keep Delta smelt away from export facilities.¹⁴² This proposed project, currently on hold, would install temporary barriers along the two waterways, which are heavily used by boaters. As currently proposed, the gates would be closed at all times during certain times of the year, prohibiting boat passage.

Invasive Aquatic Vegetation

Two non-native plants that have invaded the Delta are water hyacinth and *Egeria densa*. Water hyacinths float on the surface as well as root along shorelines, while *Egeria densa* is a subsurface water weed. By the 1980s severe infestations of water hyacinth had clogged navigation channels and marinas, creating problems for marina owners, safety hazards for boaters, and issues for the native ecosystem. *Egeria densa* forms dense, submerged mats of vegetation, which can accentuate the process of siltation (discussed above), be dangerous for swimmers, and create operational problems for both boaters and water infrastructure. DBW has primary responsibility for removing water hyacinth and *Egeria densa*, though the program is underfunded compared to the magnitude of the problem. More recently, South American Spongeplant (*Limnobium laevigatum*), a floating plant similar to water hyacinth, has been found in California waterways and is being watched by local and state agencies for potential infestations.¹⁴³ DBW does not currently have authorization to remove or treat Spongeplant.

Waterway Obstructions

Prior studies have repeatedly cited water obstructions as a significant problem for boaters. The Franks Tract area has been identified as an especially dangerous area for boating because it

¹⁴⁰ For more information, see <http://www.deltaltms.com/index.htm>

¹⁴¹ <http://www.deltaltms.com/DredDispReusePer.htm>

¹⁴² http://www.usbr.gov/mp/2gates/docs/2-Gates_Factsheet_latest.pdf and <http://www.water.ca.gov/deltainit/docs/TwoGatesProject.pdf>

¹⁴³ Akers, Patrick. Aquatic Weed Integrated Vegetation Management Plan – Contra Costa Delta. Updated 10/9/2010. Found at <http://www.delta.ca.gov/res/docs/Spongeplant%207%2028%2011.pdf>

was once a levee-protected island and now, although flooded, is shallow and obstructed by submerged levees and vegetation debris.

Snags, debris, floating logs, and abandoned vessels in the river and sloughs are very dangerous to boaters throughout the Delta. Until about 20 years ago, U.S. Army Corps of Engineers was responsible for keeping the waterways clear but no longer provides that service. The responsibility has fallen to local county sheriffs' departments, which lack the manpower, proper equipment, and funding to adequately provide obstruction-removal services and to remove the seasonal "crop" of flotsam that follows winter high-water flows. Some local assistance funding for the removal of abandoned recreational vessels and other navigational hazards is provided through the Department of Boating and Waterways' Abandoned Watercraft Abatement Fund (AWAF) grant program, though needs exceed funding availability.

Water Quality

Surveys of boaters utilizing the Delta have frequently revealed water quality as the top or one of the top-mentioned concerns or issues. In a survey conducted as part of the *Sacramento-San Joaquin Delta Boating Needs Assessment*,¹⁴⁴ 74 percent of large-boat owners and 79 percent of small-boat owners identified water quality as an attribute of concern in the Delta. Concerns associated with water quality included risks or perceived risks related to body contact, possible sewage contamination, aquatic weeds, and water clarity. Boater perceptions of water quality may also differ from water quality best suited for native fish species (i.e., turbidity). In a 2009 study, 70 percent of boaters were concerned about water quality for drinking while 63 percent of boaters were concerned about water quality for swimming.¹⁴⁵

Boating Destinations

Surveys of boaters also have found a high desire for more boat-in destinations within the Delta.¹⁴⁶ These requests tend to take three different forms.

1. Major boat-in, mooring, and camping attractions such as the Delta Meadows.
2. Numerous smaller day-use areas with restrooms, picnic, and beach facilities.
3. Additional convenience docks adjacent to Legacy Communities such as that established adjacent to Walnut Grove.

These facilities can create problems for adjacent agricultural interests. If development of such new areas is contemplated, they should be placed adjacent to public lands or in areas that avoid the risk of trespass, vandalism, and other conflicts.

Highly Sensitive Habitat Areas

There are several existing proposals (e.g., Delta Plan, Ecosystem Restoration Program) to expand and enhance habitat areas in certain waterways and islands. Conflicts can occur between recreational boating and habitat interests, depending on the boating activity, speed, motor, seasons, and frequency. Additionally, conflicts may result if the public is precluded from recreational access in these proposed restored-habitat areas.

3.3 Existing Operations Conditions

There are several operations-condition issues and constraints that were also described in *The Aquatic Recreation Component of the Delta Recreation Strategy Plan*.¹⁴⁷ A summary of the

¹⁴⁴ DBW 2002, p. 4-23

¹⁴⁵ DBW 2009, p. 134

¹⁴⁶ DBW 2002, p. 3-12 – 3-14

¹⁴⁷ DPC 2006, pp. 56-69

potential operational constraints discussed include user group conflicts, water management related constraints, and regulation and law enforcement issues. Most of these issues are compounded by the lack of an overall responsible agency throughout the Delta, due to the overlapping jurisdictions of several counties and cities.

User Group Conflicts

The diversity of boating activities in the Delta, from high-speed wakeboarding and personal watercraft (PWC) usage to fishing and non-motorized craft (e.g., canoe, kayak) results in conflicts between some user groups. Such conflicts are normally just a lack of common courtesy, rather than citable offenses. However, when one responsible entity manages water recreation use, basic rules and regulations can be established to avoid conflicts. A single responsible entity or common set of regulations does not generally exist in the Delta, with the exception of “No Wake Zones” adjacent to marinas. In addition, marine patrol is fractured between ten different agencies over five counties. Safety laws are the primary concern, along with enforcement of pollution laws, speed violations, negligent operators, equipment violations, lack of life jackets, alcohol consumption, and poaching.

Private Lands/Agriculture-Recreation Conflicts

Another serious and common problem is trespass on private property. Frequently, trespass violations stem from recreationists’ misunderstanding of what property is public and what is private. Clear signage, however, does not deter some who desire to use a specific area.

Water Management

The lack of jurisdictional coordination, with no single agency ultimately responsible for management, has left an absence of adequate, coordinated waterway maintenance and security in order to enforce regulations and control user group conflicts. Additionally, there is a lack of information sources about the Delta to assist recreation users who are unfamiliar with the Delta.

Regulation

The regulatory structure in the Delta is complex, with local, state, and federal regulatory agencies imposing many overlapping layers of law on private businesses. Many of these policies and plans are summarized in Chapter 4. In many cases, regulations that are created to protect the Delta environment also inhibit the functioning of recreation-related businesses, or the development of new businesses. One example is the number of agencies that have input into the permitting process required to dredge a marina. Those can include up to three federal agencies, seven state agencies, and three local agencies; the process can take upwards of two years.¹⁴⁸

Other issues

Other primary issues and operational risks that affect recreation and its economic potential include aging marinas and other infrastructure, lack of dredging, threatened public parks closures, continued lack of adequate levels of public funding for law enforcement and operations and maintenance of public facilities, development encroachment, flood and earthquake risk, rising sea level, water conveyance management changes, and increasing traffic.

¹⁴⁸ DPC 2006, p. 59

3.4 Visitation and Demand

3.4.1 Defining Market Area

In order to describe the economic impact of recreation on the Delta economy, the market area for Delta recreationists needs to be defined. Planners need to understand what percentage of users come from which areas, such as Delta counties, surrounding counties, Southern California, the western region of the United States, and beyond national borders.

In *The Sacramento-San Joaquin Delta Boating Needs Assessment*, the concepts of the Delta Primary and Secondary Market Areas were introduced.¹⁴⁹ A survey of statewide registered boat owners found that 77 percent of respondents who reported they had recently boated in the Delta resided within approximately 75 miles of the Delta.¹⁵⁰ This area was designated as the Primary Market Area for the Delta and included the counties of Alameda, Calaveras, Contra Costa, Marin, Napa, Sacramento, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Solano, and Stanislaus. The study further defined a Secondary Market Area which represented the point of origin of another 8 percent of all Delta boating trips. The Secondary Market Area includes the counties of Amador, Colusa, El Dorado, Lake, Mariposa, Mendocino, Merced, Monterey, Placer, San Benito, Sonoma, Sutter, Tuolumne, and Yolo. Combined, the Primary and Secondary Market Areas represent approximately 85 percent of all Delta boating visitors (Figure 30).

Although this concept was developed for boating recreation, it is applicable to Delta recreation as a whole. While some visitors to the Delta do come from Southern California, out-of-state, and international locations, the majority of visitors are from Northern California. These visitors represent the focal market for Delta recreation growth opportunities in the future. Population statistics and trends for the Market Area are presented in Table 29. Activity participation numbers and demand models will focus on this area. In summary, the total Market Area had a population estimate of approximately 12 million in 2010, with projections of 17.6 million by 2050.

Table 29 Population Projections for the Primary and Secondary Market Areas

	2010	2020	2030	2040	2050
Market Area Population (millions)	11.9	13.4	14.9	16.3	17.6
Growth Rate		12.7%	10.8%	9.3%	7.9%
Source: Global Insight Forecast, 2010 Census Results					

Within the Market Area for Delta recreation, other recreation areas actively compete for participants and their dollars. Residents of the Market Area have several different natural resource-oriented destinations within Northern California that they could visit. Boaters can visit several reservoirs throughout Northern California, including Shasta Lake, Lake Oroville, and Folsom Lake, or can recreate on the San Francisco Bay. Anglers can fish in the numerous reservoirs, but also in the streams and rivers feeding those lakes and reservoirs, such as the Feather River, American River, and Sacramento River. People visiting historic or cultural areas can also visit Old Sacramento, Gold Country, or San Francisco. Wine tourists can visit Napa,

¹⁴⁹ DBW 2002, p. 6-4 - 6-6

¹⁵⁰ A more recent statewide survey of boaters supports this overall Market Area conclusion, noting that boaters from the Central Valley, Sacramento Basin, and San Francisco Bay Area boated more days per year on the Delta than boaters from other regions of the state (DBW et. al 2011, p. 86-87).

Sonoma, or the Sierra foothills. Other recreation and tourist destinations in Northern California include the Monterey Bay area, San Francisco Bay area, the Sierras, and north coast redwoods.

Figure 30 Delta Market Area and Competing Regions¹⁵¹



3.4.2 Statewide Recreation Survey/Study Summaries

In order to present an update on the current status and overall trends of recreation and tourism in the Delta, a multitude of sources is reviewed, ranging from U.S. Fish and Wildlife Service to Delta Protection Commission publications. Unfortunately, no one study or survey presents a

¹⁵¹ For high resolution image see <http://forecast.pacific.edu/desp-figs.html>

complete picture of current recreation and tourism visitation and economic impact in the Delta. Summary information from relevant studies is presented below.

3.4.2.1 State Parks Surveys Recreation Demand Overview

State Parks completes a *Survey on Public Opinions and Attitudes on Outdoor Recreation in California* approximately every five years to comply with federal grant regulations and to “provide a comprehensive view of the outdoor recreation patterns and preferences of Californians.”¹⁵² This survey instrument represents the best, most recently available data on recreation preferences of Californians. Statewide demand and participation rates for a sample of specific recreation activities that occur in the Delta are listed in Table 30.

Table 30 Summary of 2008 Survey of Public Opinions on Outdoor Recreation in California Demand and Participation Rates for Selected Activities Statewide in California

Activity Type	Participation Rate	Average Annual Participation in Days
Walking for fitness or pleasure	74%	73
Bicycling on paved surfaces	36 %	38
Wildlife viewing, bird watching, viewing natural scenery	46%	27
Outdoor Photography	33%	26
Driving for pleasure, sightseeing, driving through natural scenery	60%	22
Bicycling on unpaved surfaces and trails	16%	20
Hunting	4%	17
Day hiking on trails	47%	16
Sail boating	6%	14
Fishing – freshwater	21%	13
Swimming in freshwater lakes, rivers and/or streams	31%	10
RV/trailer camping with hookups	11%	9
Motor boating, personal watercraft	15%	9
Visiting historic or cultural sites	55%	8
Picnicking in picnic areas	67%	7
Attending outdoor cultural events	56%	7
Camping in developed sites with facilities	39%	7
Visiting outdoor nature museums, zoos, gardens, or arboretums	58%	6
Paddle sports	15%	5
Source: State Parks		

The most popular activities by participation rates are walking for fitness and pleasure, picnicking, and driving for pleasure, followed by visiting outdoor nature museums, attending outdoor cultural events, and visiting historic or cultural sites. The activities which enjoy the highest participation rates (i.e., people who participate tend to participate more often) are walking for fitness or pleasure, bicycling on paved surfaces, wildlife viewing, outdoor photography, driving for pleasure, and bicycling on unpaved surfaces and trails. State Parks also breaks down participation rates by region, but these regions do not overlap well with the defined Market Area. Thus, only statewide data is reported.

¹⁵² State Parks 2009

3.4.2.2 U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation—California* presents findings from a survey completed every five years to measure the importance of wildlife-based recreation. The survey indicates that in 2006, approximately 7 percent of the total population in California participated in either hunting or fishing activities, while 21 percent of the population participated in wildlife watching. The results of the survey are summarized in Table 31. Both participation rates and average annual days of participation per year are lower than in the State Parks survey, which may be due to differing methodologies. USFWS also collects information on average trip expenditures.

Table 31 Summary of 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Activities in California by Residents and Nonresidents

Activity Type	Participation Rate	Average Annual Days of Participation	Average Trip Expenditures Per Day Per Participant (2006\$)
Fishing (Anglers)	6%	11	\$62
Hunting (Hunters)	1%	12	\$68
Wildlife Watching (Away From Home Participants)	21%	16	\$44

3.4.2.3 Department of Boating and Waterways

The Department of Boating and Waterways (DBW) *2007-2009 California Boater Survey* reports on a statewide assessment of boating habits and environmental awareness of boaters. The survey reported that in 2007, 17.8 percent of boat owners surveyed boated in the Sacramento-San Joaquin Delta as least once a year, using their boats on average 20.9 days in that location.¹⁵³ Comparatively, in 2009, 26.8 percent of those surveyed boated in the Delta, using their boats on average 25.4 days per year.¹⁵⁴ The report does not discuss any reasons for the discrepancies in numbers, or any conclusions as to whether the increase in 2009 rates represents an increase in Delta recreation, or is a reflection of sampling differences.¹⁵⁵ However, the participation rates reported in these surveys are of comparable magnitude to the 23 percent participation of boaters statewide that reported recreating in the Delta in a 1997 survey (see Section 3.4.3.2). The average number of days of participation, however, is much higher than those reported on statewide or national surveys (see above) for fishing or boating.

3.4.2.4 State Registration and License Numbers

Another way to assess potential recreation demand is through an analysis of State registration and license numbers. These numbers represent actual numbers, rather than estimates of participation rates, and can help predict potential demand.

Registered Vessels

In California, owners of any sail-powered vessels over eight feet in length and any motor-driven vessel (regardless of length) that is not documented by the U.S. Coast Guard must register their boat with the Department of Motor Vehicles (DMV). Vessels propelled solely by oars or paddles

¹⁵³ DBW 2011, p. 24

¹⁵⁴ Ibid, p. 86

¹⁵⁵ The study does, however, point out that surveys were not completed by a random sample of boaters, but rather boaters who were approached on the docks, or at boat shows. The report states, "Thus, all findings are best viewed as particular to the given sample (i.e. those boaters who participated) rather than representative of the entire population of interest (i.e. all California boaters)." DBW 2011, p. 14

(e.g., kayak, canoes) do not have to be registered.¹⁵⁶ In 2010, statewide, DMV reported 810,008 vessel registrations. As registrations are also reported by county, the Primary and Secondary Market Areas can be highlighted. In 2010, there were 214,163 vessels registered within the Primary Market Area and an additional 103,408 within the Secondary Market Area.¹⁵⁷

Resident Sport Fishing

In 2009, 1,179,312 resident sport fishing licenses statewide were issued by the Department of Fish and Game (DFG).¹⁵⁸ It is difficult to identify licenses by county, as DFG reports figures based on the county in which the license was sold, not by the origin county of the purchaser. However, DFG required all anglers who fished within the tidal influences of the Bay-Delta and downstream of dams within the watershed to purchase a Bay-Delta Sport Fishing Enhancement Stamp from 2004 to 2009. In 2009, 284,641 anglers purchased that stamp. Although a portion of anglers who purchased that stamp may have only fished upstream of the Delta, those numbers seem to provide a general magnitude snapshot of anglers in the Delta (i.e., approximately 275,000 anglers recreated in the Delta in 2009). Using this number, combined with estimates from both USFWS and State Parks that anglers fish, on average, 12 days per year, results in approximately 3.3 million fishing activity days in the Delta in 2010. Note, however, that this number does not differentiate between shore anglers or those who fish from a boat.

Hunting

In 2009, the State issued 1,056,556 game bird hunting licenses and 1,683,445 general hunting licenses, which is approximately 6 percent of the adult California population. The hunting percentage tracks well with demand numbers from State Parks.

3.4.3 Delta-Specific Recreation Survey/Study Summaries

There are several Delta-specific surveys that have been completed over the past 20 years regarding recreation, including Sacramento-San Joaquin Delta Outdoor Recreation Survey,¹⁵⁹ North Delta Recreation Use Survey,¹⁶⁰ Sacramento-San Joaquin Delta Boating Needs Assessment,¹⁶¹ and Sacramento San-Joaquin Delta Recreation Survey.¹⁶² The more recent are summarized below.

Unfortunately, there have been no recent comprehensive visitor surveys within the Delta focused on Delta recreationist's activities and spending patterns. Also, most surveys that have been done have only focused on boaters and anglers, the highest percentage of recreationists in the Delta, but not the only ones. This lack of primary data hampers planning and marketing efforts.

¹⁵⁶ A DBW study estimated a total of over 1.7 million non-motorized boats (a category which includes inflatables, kayaks, canoes, rowing boats, sailboards/kiteboards, small sailboats, and others) in California in 2006 (DBW 2009, p. 2-1 – 2-2).

¹⁵⁷ <http://www.dbw.ca.gov/PDF/VesselReg/Vessel10.pdf>

¹⁵⁸ <http://www.dfg.ca.gov/licensing/>

¹⁵⁹ DWR 1980

¹⁶⁰ DWR 1997

¹⁶¹ DBW 2002

¹⁶² State Parks 1997

3.4.3.1 Sacramento-San Joaquin Delta Boating Needs Assessment

As part of *The 2002 Sacramento-San Joaquin Delta Boating Needs Assessment*,¹⁶³ California boat owners were surveyed regarding their preferences and facility needs for boating in the Delta. The survey group was broken down into owners of large boats (equal to or greater than 26 feet in length) and small boats (less than 26 feet in length). In this statewide survey, 52 percent of all owners of large boats had boated in the Delta, with 68 percent of those having been in the previous two years. Conversely, only 40 percent of all small-boat owners had been boating in the Delta, with 61 percent of those having done so in the two previous years.¹⁶⁴

Combined with the survey information, the 2002 study also completed a demand forecast analysis of annual boating-related visitor days, estimated at 6.4 to 6.6 million in 2000 with a projected growth to 8 million by 2020.¹⁶⁵ This survey information provides the best estimate of boating-related recreation activity days in the Delta. However, it does not estimate the amount of expenditures for the boaters in the Delta. And, while boating and companion activities (fishing from a boat, swimming from the boat, etc.) represents one of the highest percentage of existing recreation uses in the Delta, it is not a full picture of all recreation.

3.4.3.2 Sacramento-San Joaquin Delta Recreation Survey

In 1997, State Parks published the *Sacramento-San Joaquin Delta Recreation Survey*, which separately surveyed boat owners and licensed anglers regarding their use of the Delta resources and how much money they spent recreating in the Delta.

The survey found that 23.5 percent of registered boat owners in California recreated in the Delta, spending an average of \$11.75 outside the Delta and \$17.20 inside the Delta (1996 dollars), a total of \$28.95 per day per person. The survey also found 23 percent of licensed anglers in the state fish in the Delta, spending an average of \$15.91 outside the Delta and \$13.57 inside the Delta (1996 dollars), a total of \$29.48 per day per person. The top five other recreation activities that boaters indicated they participated in included (in order of preference) sightseeing, viewing wildlife, fishing from shore, picnicking, and walking for pleasure. The top five non-fishing activities which anglers engaged in while in the Delta were sightseeing, boating, viewing wildlife, swimming, and walking for pleasure.

3.4.4 Delta Recreation and Tourism Visitation Estimates

There are few counts of visitor attendance in the Delta. Those that exist are limited and only represent a fraction of what is estimated to be the actual visitor count. Visitation numbers that were reported equal less than one million visitors and are presented in Table 32.

¹⁶³ DBW 2002

¹⁶⁴ For large boat owners, 52% of 68% translates to about 35% overall boater participation. For small boat owners, 40% x 61% = 24.4% of overall boaters. While the small boat participation number is similar to that described in State Parks survey (Section 3.4.3.2) and the recent DBW survey (Section 3.4.2.3), the large boater participation rates are higher.

¹⁶⁵ DBW 2002, Table 6-11

Table 32 Summary of Actual Visitation to the Delta

Site	Numbers
Brannon Island SRA (day use, 2009)	88,459
Brannon Island SRA (camping, 2009)	36,069
Delta Meadows State Park (day use, 2009)	18,933
Delta Meadows State Park (camping, 2009)	2,155
Franks Tract SRA	24,305
Stone Lakes National Wildlife Refuge (USFWS) (approx.)	7,000
Cosumnes River Preserve (approx.)	70,000
Lower Sherman Island (DFG) (approx.)	5,000
White Slough Wildlife Area (DFG) (approx.)	12,000
Yolo Basin Wildlife Area (USFWS) (approx., includes student tours)	30,000
Sherman Island (Sacramento County)	25,000
Hogback Island Fishing Access (Sacramento County)	10,800
Clarksburg Boat Launch (Yolo County)	1,713
Belden's Landing (Solano County)	15,642
Sandy Beach Park (Solano County)	100,611
Dos Reis Park (San Joaquin County)	25,815
Mossdale Crossing Regional Park (San Joaquin County)	23,630
Oak Grove Regional Park (San Joaquin County)	84,058
Westgate Landing (San Joaquin County)	10,283
Isleton Crawdad Festival (approx.)	200,000
Rio Vista Bass Derby and Festival (approx.)	12,000
Totals	796,480
Sources: State Parks 2010, personal communications	

3.4.5 Visitation Estimates by Recreation Activity Types

As actual visitor counts and current visitor survey data are lacking, visitation must be estimated. One way to estimate visitation is by looking at overall participation estimates based on survey data such as that collected by State Parks. These participation estimates can then be related to the Market Area population to derive estimates. However, participation rates vary over time as recreation activities become more or less popular.

Section 3.4.2.1 presented information regarding participation in selected activities that occur in the Delta from the most recent *State Parks Survey on Public Opinions and Attitudes on Outdoor Recreation in California*. As this survey has been taken approximately every five years, it is also a useful tool in looking at activity participation rate changes over time. In general, the activity types in which Californians participate and the level of participation have varied over time in specific activities, including freshwater fishing, backpacking, wildlife viewing, sports, swimming in a pool, etc. Over various surveys, State Parks has changed certain categories, listing 42 activity categories in 1992, to 55 in 2002, and 39 in 2008. It is difficult to track trends in individual activity categories due to changes in survey methodologies and questions. However, the percentage breakdown between three broad clusters of recreation activities has tended to remain relatively constant.

Resource-related recreation includes that which occurs in resource-related areas, including state and national parks, forest service lands, nature areas, reservoirs, rivers, the ocean, mountains, etc. Types of resource-related recreation include wildlife viewing, hunting, fishing, boating, beach activities, camping, skiing, snowboarding, and swimming in lakes, rivers, and the

ocean. Since 1992, approximately 25–30 percent of all recreation has been resource related in California.

Urban Parks-related recreation includes those activities that generally take place in developed parks, such as using play equipment, swimming in a pool, using open turf areas, golf, tennis, and team sports. Since 1992, urban parks-related recreation has represented approximately 16–23 percent of all recreation activity days.

Right of Way/Tourism-related recreation represents the largest levels of participation over time and includes hiking, jogging, walking, bicycling on paved surfaces, driving for pleasure, off-highway vehicle use, and other road- and trail-based recreation. Since 1992, this type of recreation has represented approximately 48–58 percent of all activity days in California, with walking for fitness and pleasure generally the highest ranked activity, by both percentage of participants and number of days of participation.

In the Delta, there is some level of use in each of the three recreation categories: Resource-related, urban parks-related, and right-of-way/tourism-related. As one of the more unique resource attraction areas in the state, it is only logical that primary uses would be resource-related activities. These include all variety of boating, camping, nature study/bird watching, hunting, and fishing. As described above, an estimate of 6.4 million boating visitor days per year (including fishing from a boat) was completed in 2000.¹⁶⁶ As part of the study, projections were made that this use would grow by 1 percent a year, but with the recent recession's impact, on motor boating in particular, as well as the overall lack of investment in facilities and upgrades over the past 20 years, the 2000 count likely reflects today's usage level. None of the remaining activities has had Delta-only surveys or counts, but from review of known visitation to specific sites, data regarding permits and licenses, it is estimated that these remaining uses account for roughly 1.5 million visitor days of use annually. When combined with boating, this gives a total of approximately 8 million resource-related visitor days of use per year.

The cities bordering the Delta have taken advantage of the Delta's waterways and scenic resources by locating both resource-related facilities and standard city parks on the edges of the Delta. For instance, Sacramento's Garcia Bend Park, on the Sacramento River, combines boat launching, bank fishing, and levee-top trails with organized sports, children's play, and informal park day uses. Stockton has located its largest city park and a major recreation-related redevelopment area adjacent to Delta waterways. There are approximately 300 acres of urban park and recreation areas bordering Delta resources located in the various communities which surround the Delta. On average throughout California, urban parks receive approximately 10,000 visits per acre per year.¹⁶⁷ Estimated conservatively, 2 million visitor days of urban parks-related use occurs within the Primary and Secondary Zones.

Driving for pleasure in the Delta is very popular and is a prime example of the right of way/tourism-related recreation use. This recreation category also includes bicycling, hiking, and walking. The winding roadways, interesting bridges, scenic views of waterways and agricultural areas, Legacy Communities, and historic structures all contribute to its visual appeal. The ability to buy fresh fruits and vegetables straight from the grower, visit a winery and sample their product, stop and pick up a freshly made deli sandwich or an ice cream at a 50-year-old grocery store all deepen the Delta experience. To many, the resources are part of the charm—the

¹⁶⁶ DBW 2002

¹⁶⁷ Dangermond 1993, Table 15.2, p. 219

historical town of Locke, the wildlife preserves, or even the beautiful oak tree canopies shading the roadway.

There have not been any use-participation estimates or surveys for this recreation activity in the Delta. However, the total participation in driving for pleasure in the Market Area can be estimated at 160 million annual participation days¹⁶⁸ (note that driving for pleasure is frequently combined with other recreation activities). As discussed above, the Market Area has a number of competing destinations including Monterey/Santa Cruz, Bay Area, Coast, Redwoods, Wine Country, Gold Country, and the Sierra Nevada. Assuming the Delta is able to capture 1–2 percent of that overall market, driving for pleasure and associated activities (e.g., visiting historic sites and farm stands, etc.) in the Delta generates significant visitation. Using these estimates, right-of-way-related recreation is approximately 2 million visitor days per year.

Combining the above estimates (8 million resource-related and 2 million right-of-way-related) would result in a total of 10 million annual visits in the Delta, plus 2 million in urban parks around the edge. In the 1990s, State Parks estimated an annual use of 12 million days in the Delta. Since that time, population in the Market Area has increased; however, there have been limited investments in new facilities or upgrades to existing facilities. The constraints outlined in Sections 3.2 and 3.3 above have not been resolved, and in some cases have been only exacerbated over time (e.g., lack of dredging, water quality). Additionally, the recession of 2007–2009 has negatively affected recreation and tourism, as well as boat registrations. Absent new research, this 12 million visits per year estimate seems to be a reasonable, conservative working number until additional primary data collection is performed.

3.4.6 Market Demand-Based Delta Visitation Estimates

Visitor estimations can be tested based on calculations of demand generated from population numbers using participation rates and frequencies. In summary, first, participation rates for various Delta activities were determined. Using these participation rates and estimates for activity days of participation (described above) and adjusting for multiple activities in a day, demand numbers (expressed as visitor days) for the Market Area can be estimated. Following that, a determination of what percentage of market demand the Delta will capture versus other recreation opportunity areas available to the Market Area is made. These estimates result in a range of 8.2–15.2 million recreation visitor activity days per year in 2010. In Appendix H, the model for demand-based participation is presented.

These recreation activities can also be broken down into the categories described above: Resource-related, urban parks-related, and right-of-way/tourism-related. The urban parks-related category was not included in these estimates, which was previously estimated to be another 2 million activity days per year. Resource-related activities result in a range of 4.5–10.7 million activity days per year, while right-of-way/tourism-related activities result in a range of 1.7–2.5 million activity days per year. These ranges are similar in magnitude to those discussed above and are summarized in Table 33.

¹⁶⁸ 12 million population x 60 percent participation x 22 average days (taken from Table 25)

Table 33 Summary of Visitation Estimates to the Delta

Type	Estimate of Visitor Days (2010) (millions)		
Activity Type Estimates		Estimate	
Resource Related		8.0	
Right-of-Way Related		2.0	
Urban Parks Related		2.0	
Total		12.0	
Demand Based Estimates	Low Estimate	Medium Estimate	High Estimate
Resource Related	4.5	7.6	10.7
Right-of-Way Related	1.7	2.1	2.5
Urban Parks Related*	N/A	2.0	N/A
Totals	8.2	11.7	15.2
Sources: U.S. Census, State Parks 2009, The Dangermond Group, EPS			
* Demand for urban parks is not estimated by the visitor market analysis.			

These estimates are based on limited available data and profession judgment of the planning team. New primary data from an up-to-date visitor survey is needed to better document existing recreation visitation and spending, including non-boating and non-fishing recreationists, and should be undertaken as a first step in future Delta recreation planning and marketing efforts.

3.5 Economic Impact/Benefits

3.5.1 Current Economic Impact Model

The economic impact of Delta recreation is first assessed based on estimated medium visitation levels and trip-related spending, with non-trip spending added subsequently. As described in Section 3.4, it is estimated that the Delta currently receives approximately 7.6 million resource-related visitor days and 2.1 million right-of-way/tourism days (market demand-based estimates). This analysis estimates that average per-day expenditures for the resource-related and right-of-way/tourism recreation activities range from about \$27 to \$76 (2011\$) depending on the activity type, of which about \$13 to \$34 is spent in the Delta. Based on these per-day spending levels and the estimated Delta visitation, direct spending in the Delta economy attributable to resource-related and right-of-way/tourism recreation is estimated at approximately \$251 million (2011\$).

This visitation-based economic impact estimate focuses on resource-related recreation, including boating, fishing, hunting, and other activities (e.g., wildlife viewing), and right-of-way/tourism activities, including hiking, biking, driving for pleasure, and cultural activities. The analysis does not account for activities at the urban fringe, including urban park recreation (e.g., team sports). Resource-related and right-of-way/tourism activities are believed to account for the majority of economic impacts of recreation occurring in the Delta.

Table 34 Estimated Resource-Related and Right-of-Way/Tourism Visitation to the Delta by Activity

Activity	Visitor Days	Percent of Total
Boating, Fishing, and Camping	6.4 Million	66%
Hunting	500,000	5%
Other Resource-Related and ROW Activities	900,000	9%
Driving for Pleasure and Tourism	1.9 Million	20%
Total Delta	9.7 Million	100%
Sources: Sacramento-San Joaquin Delta Boating Needs Assessment (2000); The Dangermond Group		
Note: Activity categories reflect similarities in economic spending patterns.		

The economic impact of recreation within the Delta is calculated by multiplying activity-specific visitor days by per-day expenditure estimates. A visitor day is defined to be a day at a recreation site by a single person doing any and all activities. While visitors may participate in multiple activities, the analysis defines a primary activity to avoid double-counting visitors. The analysis relies on the distribution of visitation by primary activity shown in Table 34.

The analysis relies on average expenditures reported by boaters (including anglers), hunters, and recreationists participating in wildlife-associated activities to estimate spending in the Delta. Specifically, the analysis uses spending data from the Sacramento-San Joaquin Delta Recreation Survey¹⁶⁹ and the National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.¹⁷⁰ The analysis considers expenditures outside and inside the Delta, based on boating and fishing expenditure patterns reported by the Sacramento-San Joaquin Delta Recreation Survey. Daily spending estimates from the Sacramento-San Joaquin Delta Recreation Survey are updated to reflect real spending increases observed by the National Survey of Fishing, Hunting, and Wildlife-Associated Recreation between 1996 and 2006. The analysis assumes that resource-related and some right-of way activities (e.g., biking and hiking) spending is generally consistent with expenditure patterns reported for wildlife viewing trips in the National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. Driving-for-pleasure spending is also based on National Survey of Fishing, Hunting, and Wildlife-Associated Recreation, though these data are adjusted to reflect lower levels of spending on lodging and recreational activities for driving-for-pleasure visits. All spending estimates are inflated to 2011 dollars using the Bureau of Labor Statistics Consumer Price Index (CPI).

Table 35 Estimated Per-Day Per Visitor Expenditure by Activity (2011\$)

	Expenditure Outside Delta	Expenditure Inside Delta	Total Expenditure
Boating, Fishing, and Camping			
Accommodation	\$2.76	\$5.25	\$8.00
Food	\$5.25	\$8.34	\$13.58
Supplies	\$8.76	\$11.34	\$20.10
Other	\$3.99	\$5.46	\$9.45
Total	\$20.75	\$30.38	\$51.13
Hunting			
Accommodation	\$12.30	\$9.06	\$21.36
Food	\$3.88	\$3.92	\$7.80
Supplies	\$20.21	\$14.24	\$34.45
Other	\$5.70	\$6.93	\$12.63
Total	\$42.08	\$34.15	\$76.24
Other Resource-Related and ROW Activities			
Accommodation	\$6.31	\$4.65	\$10.97
Food	\$6.38	\$6.45	\$12.83
Supplies	\$6.04	\$4.25	\$10.29
Other	\$1.45	\$1.77	\$3.22
Total	\$20.19	\$17.12	\$37.31
Driving for Pleasure and Tourism			
Accommodation	\$1.58	\$1.16	\$2.74
Food	\$6.38	\$6.45	\$12.83
Supplies	\$6.04	\$4.25	\$10.29
Other	\$0.73	\$0.88	\$1.61
Total	\$14.72	\$12.75	\$27.47
Sources: Sacramento-San Joaquin Delta Recreation Survey (1997); National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (1996 and 2006). <i>Note that "Accommodation" includes spending at campsites.</i>			

¹⁶⁹ State Parks 1997

¹⁷⁰ USFWS 1996 and USFWS 2006

The analysis estimates direct trip-related economic impacts from resource-related and right-of-way/tourism recreation by multiplying medium estimates for activity-specific visitor days by the per-day expenditure estimates. Current direct impacts are estimated at \$251 million inside the Delta (2011 dollars), as shown in Table 35.

Table 36 Estimated Direct Delta Recreation Trip Spending Impacts by Activity (2011\$)

	Expenditure Inside Delta
Boating, Fishing, and Camping	
Accommodation	\$33,572,000
Food	\$53,354,000
Supplies	\$72,571,000
Other	\$34,929,000
Total	\$194,426,000
Hunting	
Accommodation	\$4,822,000
Food	\$2,087,000
Supplies	\$7,579,000
Other	\$3,690,000
Total	\$18,177,000
Other Resource-Related and ROW Activities	
Accommodation	\$3,110,000
Food	\$4,312,000
Supplies	\$2,843,000
Other	\$1,183,000
Total	\$11,449,000
Driving for Pleasure and Tourism	
Accommodation	\$2,456,000
Food	\$13,621,000
Supplies	\$8,980,000
Other	\$1,868,000
Total	\$26,925,000
Resource-Related and ROW/Tourism Total	
Accommodation	\$43,960,000
Food	\$73,374,000
Supplies	\$91,973,000
Other	\$41,670,000
Total	\$250,978,000

While visitor spending occurs in a wide variety of categories, the bulk of visitor spending is likely to occur at recreation facilities, overnight accommodations, restaurants and bars, food and beverage stores, gas stations, and convenience stores. Comparing the estimated expenditure levels with total Delta revenue estimates for these industries shows that Delta recreation and tourism generates a large share of sales for these industries. For example, our estimates show that Delta recreation accounts for 90 percent of recreation sector spending, 58 percent of accommodation spending, 16 percent of sporting goods retail spending (including book and hobby stores), 12 percent of gas station sales, and 7 percent of restaurant and bar spending in the legal Delta.¹⁷¹

In addition, non-trip recreation spending can be attributed to the recreational opportunities in the Delta. In particular, the recreation impact analysis considers boat dealer, boat repair, and boat

¹⁷¹ Industry and retail data from IMPLAN and ESRI, respectively.

storage business revenues in the Delta. The analysis quantifies retail boat sales and repair service revenues using establishment-level micro data from Hoover's and NETS. These data provide an estimate of total annual boat sales and repair service revenues at Delta business establishments. The analysis reveals that boat sales and services generate roughly \$44 million per year for Delta businesses. In addition, the analysis estimates revenues associated with boat storage at \$17 million per year in the Delta. This figure reflects year-round storage of 7,200 boats at an average monthly cost of \$200 per boat.¹⁷² In total, the analysis estimates current non-trip recreation spending in the Delta at about \$61 million annually.

Combining trip-related and non-trip recreation spending in the Delta, the analysis estimates current annual direct spending on Delta recreation is approximately \$312 million. Table 37 maps the \$312 million in spending into more specific expenditure categories that are used for the economic impact analysis with IMPLAN.

Table 37 Estimated Direct Delta Recreation Trip Spending by IMPLAN sectors

Trip-Related Recreation Spending	
Hotels and motels	\$ 26,699,278
Other accommodations (i.e., campgrounds)	\$ 17,799,518
Food services and drinking places	\$ 63,364,613
Retail - Food and beverage stores	\$ 28,153,123
Retail - Gasoline	\$ 65,485,709
Retail - Sporting goods, hobby, book, and music	\$ 7,969,036
Other amusement and recreation industries (i.e., marinas)	\$ 34,806,041
Retail - General merchandise	\$ 6,862,926
Non-Trip Recreation Spending	
Retail - Motor vehicle and parts (i.e., boat dealers)	\$ 44,000,000
Other amusement and recreation industries (i.e., marinas)	\$ 17,000,000
Total	\$ 312,140,244

Table 38 summarizes the economic impact of recreation on the five-county Delta region as modeled with IMPLAN. Delta recreation and tourism supports about 3,063 jobs in the region including nearly 1,100 in restaurants and bars, 268 in hotels and motels, and 388 jobs at marinas. These jobs provide about \$100 million in labor income, and a total of \$175 million in value added to the regional economy. Based on a descriptive analysis of job location in the Delta in earlier chapters, it appears that the majority of these jobs are located in the Secondary Zone.

¹⁷² Storage of 7,200 boats reflects 60 percent occupancy of the Delta's roughly 12,000 boat slips. Some boats may be transferred to dry storage during winter months. Occupancy data and storage rates were collected through an informal survey of Delta marina/boat storage facilities.

Table 38 Economic Impact of Delta Recreation and Tourism on Five Delta Counties

Impact Type	Employment	Labor Income	Value Added	Output
Trip-Related Recreation and Tourism Impacts				
Direct Effect	1,953.5	\$52,553,680	\$ 86,648,100	\$166,731,376
Indirect Effect	395.2	\$20,301,232	\$ 34,425,490	\$ 64,612,876
Induced Effect	367.2	\$16,665,778	\$ 30,962,200	\$ 52,752,976
Total Effect	2,715.9	\$89,520,688	\$152,035,800	\$284,097,216
Non-Trip Recreation and Tourism Impacts				
Direct Effect	217.2	\$8,579,242	\$12,625,960	\$25,404,000
Indirect Effect	70.2	\$3,468,025	\$6,087,784	\$11,016,298
Induced Effect	60.6	\$2,752,687	\$5,112,832	\$8,711,717
Total Effect	348	\$14,799,954	\$23,826,570	\$45,132,016
Total Recreation and Tourism Impacts				
Direct Effect	2,170.7	\$61,132,922	\$99,274,060	\$192,135,376
Indirect Effect	465.4	\$23,769,257	\$40,513,274	\$75,629,174
Induced Effect	427.8	\$19,418,465	\$36,075,032	\$61,464,693
Total Effect	3,063.9	\$104,320,642	\$175,862,370	\$329,229,232

Table 39 shows the statewide impacts of Delta recreation and tourism. For these impacts, we estimate an additional \$205 million in recreation-related spending outside the Delta for supplies and travel. Statewide, Delta recreation and tourism supported over 5,200 jobs and \$348 million in value added.

Table 39 Economic Impact of Delta Recreation and Tourism on California

Impact Type	Employment	Labor Income	Value Added	Output
Trip-Related Recreation and Tourism Impacts				
Direct Effect	3,360.8	\$102,039,290	\$167,234,460	\$315,199,104
Indirect Effect	929.8	\$53,570,841	\$91,479,454	\$172,312,474
Induced Effect	993.0	\$49,566,491	\$89,599,932	\$157,679,829
Total Effect	5,283.6	\$205,176,626	\$348,313,870	\$645,191,408

3.5.2 The Economic Impact of Recreational Boating and Fishing in the Delta

As a follow-up to the 1997 State Parks survey, Goldman et al. produced a report, The Economic Impact of Recreational Boating and Fishing in the Delta.¹⁷³ Using data from the 1997 survey on numbers of anglers and registered boat owners and their reported expenditures, Goldman et al. estimated the expenditures of registered boaters at \$247 million in the Delta, generating \$445 million in total output, \$183 million in income, \$279 million in value added, and 8,058 jobs in the overall Delta region. For licensed anglers, expenditures totaled \$186 million in the Delta, generating \$336 million in total output, \$138 million in income, \$209 million in value added, and 6,152 jobs in the overall Delta region. The authors note that the impacts from boating and

¹⁷³ Goldman et al., 1998

fishing can not be aggregated, as many boaters fished, and many anglers boated. The authors also note that these numbers do not include the many other recreationists who participate in Delta-based activities such as driving for pleasure, non-registered boaters (i.e., kayaks and canoes), non-licensed anglers, hunters who do not boat, etc., and so is not a complete picture of the economic impacts of Delta recreation.

While the estimates of total recreation spending in the Delta are similar between the ESP and the Goldman study, at about \$250 million (Goldman's boating estimate), there are two primary reasons why the Goldman study estimates significantly higher total regional employment and output attributable to recreation in the Delta. These factors are (1) the change over time in output per worker and (2) the method of accounting for direct output. Goldman's economic data is from 1994 when each nominal dollar of spending supported more employment than it does today. Specifically, the Goldman study indicates that total output of roughly \$55,000 from Delta boating activities supports one job in the regional economy, while in today's economy the ESP finds that it takes approximately \$105,000 in boating-related output to support one job. Furthermore, the Goldman study appears to count the full value of boater spending as production output value, whereas the ESP measures output in retail industries using the retail margin (i.e., the addition to the price of a product when the product is sold through a retailer). In the ESP, the \$251 million estimate of in-Delta spending translates to approximately \$167 million in direct output, whereas the Goldman study seems to treat the full value of sales revenue (e.g., \$247 million of in-Delta boater spending) as direct output. Accounting for this difference, the Goldman study and the ESP reveal a very similar economic output multiplier within the regional economy.

3.6 Trends

The current status in Delta recreation shows a place of diverse recreation experiences, with approximately 12 million annual visitors, having an economic impact on the region of over \$300 million. Yet, this recreation mecca is also suffering from economic conditions, physical and operational constraints, pressures on water supply, regulations that restrict development, and other internal and external issues. These trends must be taken into account when projecting the Delta's recreation potential over the next 50 years, as must the Delta's recreation history.

One way of estimating recreation use over the next 50 years is to look back in time. Fifty years ago (1960s), people engaged in virtually all the recreation activities they now enjoy. User survey data exists going back a little over 50 years. There are approximately 35 different outdoor recreation activities identified by State Parks with data collected nearly every five years over the 50-year period. Most of the activities track their growth with population, but some are decreasing in percentage of the total, while others have increased.

As discussed previously, the one factor that is relatively constant is the percentage breakdown between the three broad clusters of recreation activities: resource-related, urban parks-related, and right-of-way/tourism-related, i.e., 20 percent (16-23 percent) of activities take place in urban developed parks and golf courses; 50 percent (48-58 percent) are right-of-way related, including jogging, walking, bicycling, and driving for pleasure; and the remaining 30 percent (25-30 percent) occur in resource-related areas including state and national parks, forest service lands, nature areas, reservoirs, and rivers. These percentages have remained relatively constant over time, regardless of demographic changes. Another rather constant factor to consider is that approximately 70-80 percent of the total recreation use is simple, close to home, and with very little expenditure required for special equipment.

Therefore, it is anticipated that the outdoor recreation uses we find today will still exist, that the predominance of the activities will be simple, close to home, and require little expenditures, and that around 20 percent of the use will be developed urban park-related, 50 percent right-of-way-related, and 30 percent resource-related.

The Delta may likely become even more important for these types of uses because the populations that encircle it are expanding. Elsewhere, close-by outdoor recreation opportunities are rapidly disappearing. But the combination of land use protections, flood vulnerability, and rich agriculture land provide the likelihood that the Delta will still remain relatively unchanged in coming years.

In the Delta, the present uses are highly related to the availability and condition of private facilities. Most of the boating and fishing activities rely upon private marinas, even though the activities occur on public waterways. Most of the hunting in the Delta also occurs at private hunting clubs. Most Delta-as-a-Place destinations are related to wineries, farm stands, and commercial establishments in the Legacy Communities.

Developed local and state resource-related recreation areas in the Delta are quite limited, when compared to other areas in the state. Most public lands are nature and wildlife reserves, supporting nature study and bird-watching and, in some cases, hunting, but their public access facilities are either secondary to their mission or still primarily in the planning stages. They appear to have capacity to accommodate increased use over time. Some urban parks have been developed along the edges of the Delta, primarily in Stockton.

Another way to look at trends is through latent (i.e., unmet) demand revealed by survey data. State Parks survey data reports on latent demand by activity category.¹⁷⁴ The following activities were found by State Parks to be the top five activities that adults would like to participate in more often:

1. Walking for fitness or pleasure
2. Camping in developed sites
3. Bicycling on paved surfaces
4. Day hiking on trails
5. Picnicking in picnic areas

All of these activities take place in the Delta and represent an opportunity for growing visitation, if facilities were available and attractive.

USFWS reported on trends since 1996 in fishing, hunting, and wildlife viewing. Overall in California, fishing has declined 36 percent since 1996, while hunting has declined 45 percent (though it has been flat since 2001).¹⁷⁵ Conversely, away-from-home wildlife watching is up 23 percent since 1996. These data seem to represent a trend away from consumptive recreation (i.e., hunting and fishing) and towards non-consumptive wildlife recreation (i.e., bird watching and nature photography). State Parks figures also support these trends. Recreational programming and facilities in the Delta should respond to this trend.

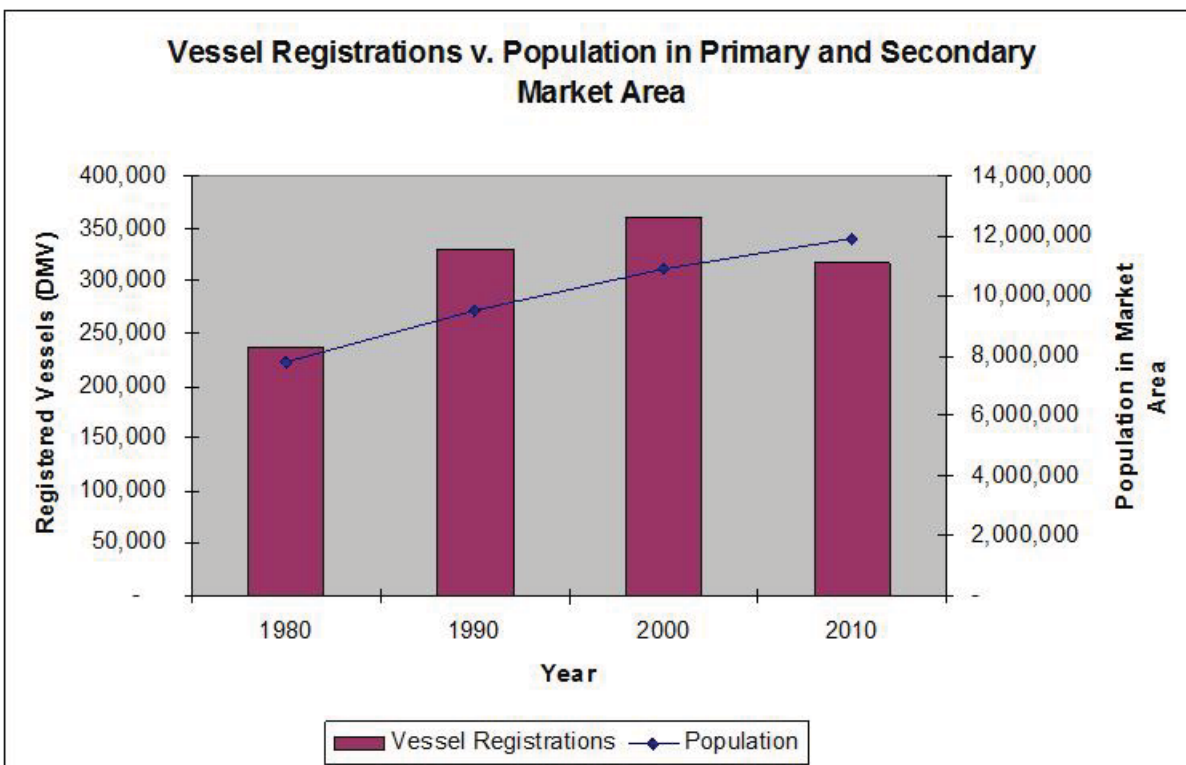
Section 3.4.2.3 above highlighted current (2010) boat registration numbers. Vessel registrations are down substantially since 2000 in both the state and the Primary and Secondary Market

¹⁷⁴ State Parks 2009, p. 36

¹⁷⁵ USFWS 2006

Area. In 2000, vessel registrations were at 902,447 statewide, and 359,541 in the Market Area, compared to 2010 numbers of 810,008 statewide and 317,571 in the Market Area. These numbers represent a decrease of 11 percent statewide and 13 percent in the Market Area. The 2010 number, however, is likely affected by the ongoing “great recession” and increasing costs of fuel and it cannot yet be determined if it represents a new trend. Figure 31 below shows boat registrations versus population over the past 40 years in the Market Area.

Figure 31 Vessel Registration v. Population in Primary and Secondary Market Area, 1980-2010



While boat registrations were increasing at a faster pace than population growth through the 1980s, they have increased at a slower pace than population growth since then, and as mentioned above, have decreased overall since 2000. As boating is the dominant recreational activity in the Delta, these trends indicate that motorized and sail boating may not keep pace with population growth over the next 50 years.

Trends in non-motorized boating, however, seem to counter those of motorized boating, with DBW estimating that California households owning non-motorized boats increased from 7.11 percent of households in 2002 to 8.46 percent in 2010, with kayaks accounting for almost one-half of estimated participation.¹⁷⁶ Overall, the report concludes that “the number of non-motorized boating participants is expected to continue to increase”.¹⁷⁷ This report also notes that per-trip expenditures for non-motorized boaters are less than per-trip expenditures for motorized boaters,¹⁷⁸ a conclusion which has implications for continuing economic sustainability.

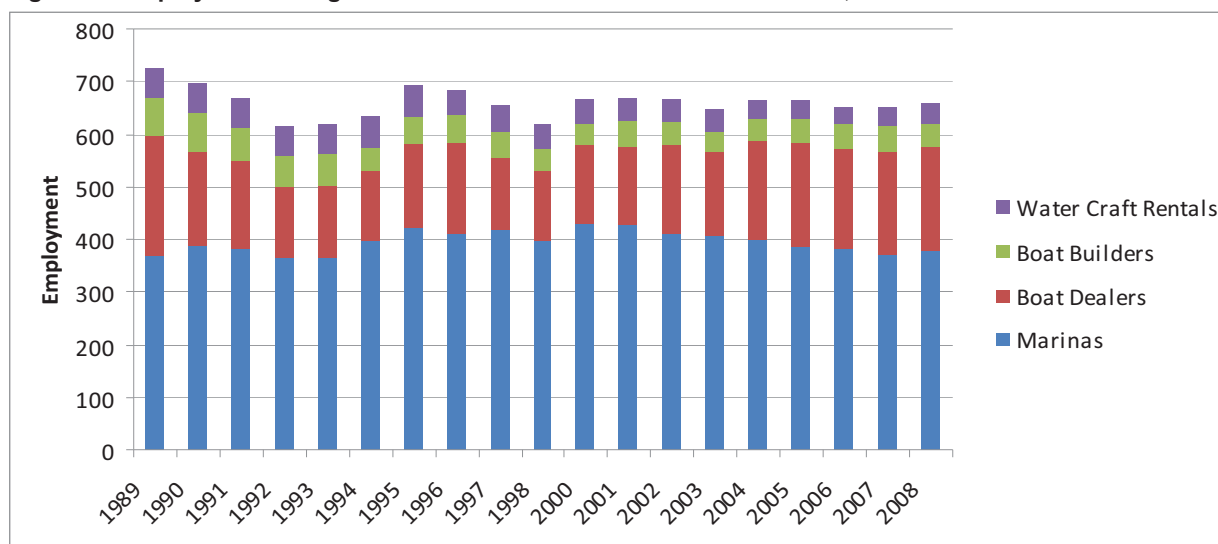
¹⁷⁶ DBW 2009, p. 9-1 – 9-6

¹⁷⁷ Ibid, p. 9-11

¹⁷⁸ Ibid, p. 4-5

Available business enterprise-based data reveal stagnation in the Delta's recreation economy. Over the past 20 years, employment in marina enterprises has been relatively flat. In 1990, the database counts 95 marina-related establishments, 90 in 2000, and 93 in 2008. Likewise, employment by water-based recreation-related establishments has remained relatively constant over the past 20 years, as demonstrated by Figure 32.

Figure 32 Employment in Legal Delta for Water-Based Recreation Sectors, 1989-2008



Source: NETS

There are several other external or societal trends that could affect the present recreation use and demand over the next 50 years.

- Physical changes to the Delta related to habitat restoration and water deliveries, which will likely result in increased habitat acres and water surfaces with a potential decline in agriculture acreage
- Increasing population and development growth surrounding the Delta, forming a larger urban ring around significant portions, with probable exceptions for valuable, healthy near-urban ecosystems and productive agricultural lands
- Increasing population seeking out various forms of outdoor resource-related recreation, increasing the significance of the Delta as a contrast to local urbanized areas
- An increasing interest in maintaining close-to-urban agriculture to supply fresh fruits and vegetables
- Increasing concerns over “nature deficit disorder” among young people and greater interest in youth access to meaningful natural experiences
- Health concerns, such as obesity, and the need for more exercise activities
- Continued decline and stagnation of existing facilities without new capital investments

3.7 State Parks Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh¹⁷⁹

Under SBx7-1, State Parks was directed to prepare a proposal “to expand within the Delta the network of state recreation areas, combining existing and newly designated areas.”¹⁸⁰ The resulting *Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh*

¹⁷⁹ State Parks 2011

¹⁸⁰ Water Code Section 85301(c)(1)

discusses existing demand, existing resources, trends, and recommendations and outcomes. By its legislative mandate, the report focuses on public sector resources and state agencies. In this report, State Parks introduces the concept of a Gateway-Basecamp-Adventure strategy. A Gateway is defined as a “community on the edge...providing information to visitors about recreation opportunities available in an area and equipping them with supplies for the adventure.”¹⁸¹ A Basecamp is a “park, resort, or town...providing services, as well as facilities.”¹⁸² One would depart for an “Adventure” or activity from a gateway or basecamp. Gateways, basecamps, and adventure areas State Parks recommends are linked by scenic highways and biking, hiking, and boating trails. Around this strategy, State Parks discusses the importance of partnerships, and recommends building a Delta brand, providing direction, diversifying activities, and minimizing costs by seizing multi-use opportunities.

Using the Gateway-Basecamp-Adventure strategy, State Parks recommends improvements to existing State Parks within and along the edge of the Delta, and describes four potential future State Parks in the Delta-Suisun Marsh Region: Barker Slough, Elkhorn Basin, Wright-Elmwood Tract, and South Delta.¹⁸³ State Parks also provides recommendations for other state agencies, including DFG, DBW, Caltrans, DWR, the State Lands Commission, Delta Protection Commission, Delta Conservancy, and Coastal Conservancy. Other recommendations include completing the recreation trails system in the Delta and for DPC to continue to pursue a National Heritage Area designation.¹⁸⁴

Important to this Economic Sustainability Plan, State Parks also recommends ways to increase recreation contribution to the Delta economy.

- Promote recreation to increase spending
- Increase the variety of recreation available
- Encourage visitors to stay longer and experience additional activities
- Offer a mix of both affordable and higher cost recreation activities
- Increase spending for supplies and equipment in Gateways
- Enhance and promote scenic highways and trails

State Parks *Recreation Proposal for the Sacramento San Joaquin Delta and Suisun Marsh* offers a strong framework for needs and opportunities for the provision of recreation and tourism in the Delta by state agencies. However, the report concludes, “Recreation and tourism can also help sustain the region’s economy and enhance its quality of life. This report’s recommendations may remain just a glittering vision, however, without new funds for recreation.”¹⁸⁵

3.8 Key Findings

- The Sacramento-San Joaquin Delta is an area where a diversity of recreation experiences is evident, from boating in open water or through winding tree-covered channels, to hunting or wildlife viewing, studying local California history, or tasting award-winning local wines. Several physical and operational constraints have an impact on current facilities and recreation access, including sediment accumulation, water gates, screens, and barriers,

¹⁸¹ State Parks 2011, p. 6

¹⁸² Ibid

¹⁸³ Ibid, p. 22-24

¹⁸⁴ Ibid, p. 26-29

¹⁸⁵ Ibid, p. 34

invasive species, waterway obstructions, water quality, lack of boat-in destinations and access points, user group conflicts, private land trespass, and complex regulations.

- While a percentage of visitors to the Delta come from elsewhere, the majority of visitors are from Northern California. These visitors represent the focal market for Delta recreation growth opportunities in the future, and their places of origin define the market area for this study. The total Market Area had a population estimate of approximately 11.9 million in 2010, with projections of 17.6 million by 2050.
- Recreation visitation for 2010 is estimated to be approximately 8 million *resource-related* (e.g., boating and fishing) visitor days of use per year, 2 million *urban parks-related* (e.g., golf, picnic, and turf sports), and 2 million *right-of-way-related* (e.g., bicycling and driving for pleasure) recreation visitors/year. The total number of activity days is conservatively estimated at approximately 12 million/year.¹⁸⁶
- An up-to-date visitor survey with new primary data, particularly on non-boating and non-fishing recreation, is needed to better document existing recreation visitation and spending. Employment in recreation-related economic sectors, including marinas, water craft rental, boat dealers, and boat building and repair, within the Primary Zone has been relatively flat over the past 20 years.
- The principal changes and trends that could affect the present recreation use and demand over the next 50-90 years are: physical changes to the Delta due to water conveyance management changes and rising sea levels, increasing population and development growth, increasing agritourism, non-consumptive resources-based recreation, and habitat-related recreation, and the likely desire for closer to home recreation.
- The current direct spending in the Delta region from *resource-related* and *right-of-way/tourism-related* trips and related non-trip spending is estimated at roughly \$312 million inside the Delta (in 2011 dollars). Additional economic impacts associated with urban recreation are not quantified, but are likely significant.
- Delta recreation and tourism supports over 3,000 jobs in the five Delta counties. These jobs provide about \$100 million in labor income, and a total of \$175 million in value added to the regional economy.
- Delta recreation and tourism supports over 5,200 jobs across all of California, and contributes about \$348 million in value added.
- *State Parks Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh* offers a strong framework for needs and opportunities for the provision of recreation and tourism in the Delta by state agencies.

4 Outcomes and Strategies

The prior section discussed the current status of recreation in the Delta, including existing facilities and estimates for existing visitation and economic impacts. There was also a short discussion on current trends. In this section, a plan is developed for a strategy for economic sustainability for Delta recreation and tourism.

The proposed recreation portion of the Delta Economic Sustainability Plan brings together information regarding baseline conditions described in Chapter 6 with three topic areas—constraints/issues, influences on the Delta as an evolving place, and potential responses—as a means of determining how the Delta might evolve over time. Principles, goals and physical strategies are then applied in order to develop the proposed recreation plan.

¹⁸⁶ Estimates are based on limited available data combined with professional judgment.

4.1 Opportunities and Constraints

There are many current and future potential constraints and issues which will shape recreation potential in the Delta. Several existing physical and operational items were described in Sections 3.2 and 3.3 of this chapter. Those that would have the most significant impacts on future planning scenarios are expanded below.

4.1.1 Limited Access and Visibility

The Delta is a recreation landscape of two faces: one seen from the water and the other experienced largely from a car or in one of the Legacy Communities. For all its hundreds of miles of waterways, the waters of the Delta can be publicly accessed in a relatively few places. Dotted with private marinas and few public parks, boats can only reach Delta waters from these boat slips and ramps, as well as from private docks and remote put-in spots outside the Delta. Transient tie-ups or places to temporarily tie up a boat are also limited. Similarly, there are relatively few landside recreation facilities that offer public fishing, camping, or picnicking, and overnight hospitality options are relatively few. With few communities, parks, trails, and public destinations, the vast land area for the most part is accessible only through the windshield.

4.1.2 No Distinct Delta Identity

For the same reason the Delta lacks a distinct identity as place, it lacks both an operational and marketing identity. Unlike a known brand like “Monterey,” “Delta” lacks brand recognition. In addition, it lacks a strong identifying focal point area, like Fisherman’s Wharf and the Monterey Bay Aquarium. For all its beauty, allure, and recreational diversity, the Delta functions as a largely underutilized destination, unknown to many in the larger Sacramento and Bay areas and the state, and not easily discoverable to those who do not already know and use the area.

4.1.3 Two Contrasting Physical Environments

The Delta comprises two contrasting physical environments that bump against one another, sometimes harmoniously and sometimes in conflict. Many agricultural islands, hidden from the waterways by levees, lie significantly below river level. This physical, visual, and land use juxtaposition makes the edge between the two environments problematic and limits access to waterways.

Boating use occurs on public waterways that abut, for the most part, privately-owned agricultural or residential property. It is the inclination of boaters to occasionally beach their boats and access the shoreline, which can result in trespass and potential damage to private property. Boat wakes can damage levees. Levees, subject to erosion, are often lined with armor, which discourages landing by boaters and precludes shoreline recreation use other than incidental bank fishing by landside fishermen. The resulting environment allows for boat passage but virtually no shoreline recreation use in these areas, a significant deterrent to expanded boating use. Aesthetic values of unvegetated riprap levees are low, further diminishing their appeal.

4.1.4 Private Marina Limitations

Most boat access to Delta waterways is provided through private marinas and boat launch ramps; State and local public launch facilities are provided to a limited degree. There are relatively few opportunities for overnight stays for boaters without self-contained facilities. Over the years, the private marina market has adjusted to provide for the demand for boat storage slip space, which is the primary revenue source for marina operators. Launch ramps and parking space for trailered boats is available in limited supply at marinas as boat launch

revenues generally are not a significant revenue source and land for parking is limited landside of the levees.

Marinas face siltation of their boat basins, and costs and regulatory hurdles to maintenance are significant. Many marinas and resorts are aging and suffer from deferred maintenance, diminishing their appeal to new users.

A further limiting factor to increased use by visitors trailering boats to the Delta is its “hidden” quality. Boat put-in locations are often not easily seen and must be sought out by the first-time visitor. Many facilities are located in out-of-the-way locations. Further, given the narrow spaces many marinas occupy, with parking and roadways built atop narrow levees, launching and parking maneuvers can be challenging, even for experienced operators. Boating use has tended to be relatively local in nature and therefore primarily a day-use activity, which limits economic activity generated by recreation.

4.1.5 Other Facility Limitations

In addition to private marinas that only offer slip rentals, launching, and related services, some private resorts offer camping and day-use facilities. Resorts of this kind are limited, revenue potential is also limited, and these resorts operate on at a tight margin. There are some state and local parks that also offer similar facilities, however, such landside recreation amenities are relatively rare in the Delta.

Traditionally, in the Delta, recreation improvements have been largely provided by the private sector, and public investment in land and facilities has been small. Declining public recreation budgets have contributed to declining maintenance and facility quality and no schedule for expanded development. State and local agencies have developed multiple plans for expanding Delta recreation that have remained unfunded for many years. The most recent plan by State Parks, *Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh*, states that no funding is available for implementation and the largest State Park in the Delta, Brannon Island State Recreation Area, is currently on the proposed closure list.

4.1.6 Waterway Concerns

An additional constraint to expanded boating use in the Delta is its geography. By its nature, a labyrinth of waterways that lacks obvious navigational landmarks, the boater unfamiliar with it can easily become lost. Although increasing use of GPS devices reduces this risk, many inexperienced boaters continue to be reluctant to tackle Delta navigation.

Similarly, Delta waterways can be unpredictable in depth and contain unseen underwater hazards that can discourage the uninitiated boater. Snags, sandbars, and submerged levees are common hazards that can catch the casual boater.

Water quality is also an issue to some boaters and shoreline users in the Delta. With limited clarity and concern over water quality, some are deterred from engaging in water contact in the Delta. Velocity of currents makes swimming more hazardous in some locations. Many boat owners avoid saline water, and salt water intrusion could render increasing areas of the Delta off limits to these boaters. Invasive aquatic plants, including water hyacinth and *Egeria densa*, further reduce access and appeal to boaters and fishermen by impeding navigation and damaging boat motors.

4.1.7 Regulatory Environment

While most local jurisdictions, including counties and cities, have policies that encourage recreation in the Delta, they also have regulations which preclude or severely limit new development or services, or redevelopment of existing facilities. So, while protecting the atmosphere of the Delta-as-a-Place, these same policies also inhibit economic growth and sustainability. Additionally, several state and federal agencies have regulatory authority over changes to Delta facilities. The effects are felt from businesses in Legacy Communities to isolated wineries to marinas and other public and private recreation facilities. For instance, permits for a new marina or even a marina upgrade may require input from the local county, the State Department of Boating and Waterways, Delta Protection Commission, State Lands Commission, Reclamation Board, State Department of Fish and Game, Regional Water Quality Control Board, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and National Marine Fisheries Service. These many layers of regulations are, at best, costly, time consuming, and confusing, and, at worst, completely prohibitive to new recreation developments or enhancements.

4.2 Opportunities and Influences

This Plan is charged with working within the context of the Delta as an evolving place. The existing baseline conditions, as well as its constraints and issues, will affect that evolution. The following key opportunities and influences will also help shape that future.

4.2.1 Increasing Demand

By 2050, population in the counties surrounding the Delta is projected to grow by 50–60 percent. As population and gasoline prices increase, there will be a growing focus on recreation opportunities close to population centers. The Delta is not only close to major population centers, but accessible via the interstate and state highway network that surrounds and bisects it. Increasingly, past experience would indicate, the Delta, will become a primary source of open space and recreation activity for the greater Northern California region.

If so, existing boating access and landside recreation opportunities today will be inadequate to attract and accommodate this growing demand. New opportunities to experience the existing and restored natural habitats of the Delta will likely attract new visitors. Similarly, increased agritourism should create demand for expanded overnight visits to Legacy Communities and the growing wine region. Recreation, wildlife viewing, and agritourism will likely grow together, fueling the interest in the Delta and reinforcing its emerging identity as “place”. A synergy between these uses will create new opportunities for visitation and economic activity in the Delta.

4.2.2 Physical Capacity of Delta Waterways

Current levels of boating and fishing fall far short of the physical capacity of the Delta waterways for recreation. Within the great size and diversity of Delta waterways, there is significant capacity for additional boating use and diversity in the future. Population growth will expand the demand for all forms of recreation in the Delta. These uses can be accommodated through expanded points of access via land- and water-based facilities. These facilities in some cases would require conversion of land from other uses.

4.2.3 Public Lands

Nearly all public lands that have been acquired in recent years within the Delta have been set aside as wildlife habitat but provide little or no public recreation use or access. There may be

significant opportunities to include appropriate public use that would be compatible with habitat-management objectives. Renewed funding for implementation of agency recreation plans, such as State Parks' *Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh*, could provide a significant expansion of access and facilities that could boost recreation use.

4.2.4 Quality of Life

The Delta appeals to both residents and visitors not only because various Delta features combine to create a unique aesthetic, but also because the tangible attributes and the intangible Delta aesthetic add value to their lives. Planners can anticipate that residents and recreationists will express strong viewpoints on suggested plans or changes that would have an impact on the Delta's quality-of-life features, and that residents and visitors will want these quality-of-life values incorporated in planning efforts.

4.2.5 Delta-as-a-Place

The Delta must be a better-defined destination for visitors. Increased programming, special events, festivals, and marketing have the potential to significantly increase visitation and recreation use Delta-wide. Linking the vitality and tourist appeal within Legacy Communities would boost overall Delta recreation and attract a new segment of visitors. Joint marketing of events in these communities tied to farm trail, wine trail, and boat trail tourism would be a further means of increasing visitation, visitor spending, and economic activity. These steps, adjunct to traditional Delta recreation enhancements, would boost the identity of the Delta as a destination with multiple attractions and enhance Delta branding and recognition.

The Delta-as-a-Place identity would also be enhanced by efforts to identify and establish Gateways and edges to the Delta that reinforce its unique landscape character, particularly along the primary east-west highway corridors.

4.2.6 Market Area Development

Projected population growth within communities on the edge of the Delta may likely create additional demand for recreation offerings. Urban water-front recreation improvements such as those built by the City of Stockton over the last few years will provide capacity for new visitors to participate in leisure activities. This trend could continue if communities such as Rio Vista, Tracy, and Lathrop orient planned development towards the Delta, interconnecting recreation corridors on the periphery of the Delta, and contributing to buffer zones between urbanized areas and the Delta to provide additional recreation opportunities.

Development of Delta-edge and cross-Delta trails, connection of open space areas, and capturing land and water views within the Delta can further add to the growing fabric of Delta recreation and access and the capacity to accommodate additional visitors.

4.2.7 Agriculture Trends

Evolutions occurring in agriculture include increases in wine grapes and wineries, a growing interest in developing a coordinated "farm trails" effort with the goal of increasing agritourism and direct sale of agriculture products, and the desire to "brand" Delta agriculture products. These three efforts could influence Delta recreation economics.

4.2.8 Recreation Activity Trends

Recreation use patterns continue to evolve. Basic recreation activities are generally constant, but trends occur within the activity. For instance, in boating, there are two trends where large

craft are increasing faster than small craft, and participation in non-motorized boating is increasing at a faster rate than motorized. Other trends involve the provision of high-end camping, recreation-oriented urban redevelopment and development centers, and increased interest in small rural communities.

4.2.9 Coequal Goals and Risk Management

The efforts and ultimate implementation to meet the coequal goals of protecting, restoring, and enhancing the Delta ecosystem and creating a reliable water supply will influence future recreation developments and activities in the Delta. Studies of and responses to numerous potential concerns including land subsidence, earthquakes, rising seas, and changing precipitation patterns could also influence the future of recreation and tourism in the Delta.

4.2.10 Future Prominence

As growth in the region and the state continues over the coming decades, the Delta has the potential to emerge as a recreation resource of increasing value and appeal and its prominence as a destination will expand accordingly. Increasing water-oriented recreation demand and the associated demand for landside recreation activities can combine with the growing appeal of agritourism and locally-grown food and wine to reinforce the identity of the Delta as a unique and desirable recreation destination for the northern California region.

4.3 Potential Responses

The potential response to the constraints, issues, and influences should shape the Delta's Recreation Economic Sustainability Plan. In the past, various federal, state, and local agencies, as well as nonprofit and for-profit entities have each contributed pieces of the total recreation picture in a somewhat uncoordinated fashion.

California State Parks, in the *Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh*¹⁸⁷ lays out a coordinated response for the various state agencies involved in the Delta. It also speaks to the need for both itself and other state agencies to partner with local agencies, nonprofits, and private businesses.

One of the most successful and easily understood examples of creating a recreation destination in California is the Monterey Old Fisherman's Wharf which, in a small area, attracts in excess of six million visitors annually. It is a merger of public and private efforts wherein agencies created a synergistic setting for private enterprise. The city built the wharf, marina infrastructure, parking lots, and access roads, the State Department of Boating and Waterways provided marina development loans, and State Parks contributed an adjacent visitor center and historic building restorations.¹⁸⁸ The private sector created and operates the restaurants and shops along with providing fishing, whale watching, and other recreation activities. The Fisherman's Wharf Association helps to coordinate and market the wharf. State Parks continues to operate Monterey State Historic Park, a collection of historic houses and buildings, with interpretation, educational programs, and special events support from the nonprofit Monterey State Historic Park Association.^{189,190}

¹⁸⁷ State Parks 2011

¹⁸⁸ <http://montereywharf.com/index.php?page=history>

¹⁸⁹ http://www.parks.ca.gov/default.asp?page_id=575

¹⁹⁰ <http://www.montereystatehistoricparkassociation.org/index.html>

Private enterprise is both the existing and future driver of economic sustainability in the Delta, but its future success level can be shaped by the public facility contributions and regulatory environment. This Plan recommends developing a synergistic response between state and local agencies, nonprofits, and the private sector.

The implementation of the ESP will be very complex. Overcoming the multiple steps, regulations, and planning processes by either agencies or individuals can be difficult for normal projects. But, the multiplicity of agencies and interlocking safeguards and regulations in the Delta multiplies the difficulties. It is recommended that a facilitator organization be named to assist implementation efforts, to coordinate funding, and to stimulate funding for vital actions. A more in-depth discussion is presented in Chapter 11 of this report.

4.4 Recreation Enhancement Principles and Goals

It is recommended that the following principles and goals be used to guide development of planning scenarios for future Delta recreation. These principles and goals were developed to minimize current constraints and to take advantage of current and future opportunities. This Plan was developed with the following guidelines at the forefront.

- Avoid developing recreation facilities within high flood risk areas or areas inaccessible during emergency flood events.
- Avoid conflicts with vital habitat resources.
- Respect and protect agriculture areas. Avoid locating recreation sites in areas that would create conflicts with agriculture and instead site, when possible, in more compatible areas such as around the edges of the Delta, in combination with Legacy Communities, and by expanding existing areas.
- Respect and protect hunting activities by avoiding spatial and/or timing conflicts with other activities.
- Create positive park, open space, and trail edges that buffer the Delta from encroaching urban and suburban areas.
- Encourage both commercial and public recreation facilities—including marinas, food service, overnight accommodations, and standard community park developments—within or on the edge of Legacy Communities and existing recreation areas.
- Develop appropriate visitor-serving access facilities at wildlife areas providing nature study, bird-watching, and environmental education. Include interpretive signage to educate the public about the natural resources values of the Delta and their need for protection.
- Recognize private enterprise's primary role in providing recreation facilities and encourage and facilitate appropriate expansion to keep up with increasing populations and changing demand.
- Support programs to assist existing private recreation providers, such as identifying or providing loan funds, coordinating marina dredging and permitting, and helping them respond to sea-level changes.
- Recognize the multiplicity of public agencies and nonprofit entities which provide recreation in the Delta and encourage coordination in planning for, and provision of, recreation opportunities.
- Utilize State Parks Basecamp, Gateway, and Adventure concepts, as described in the *Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh*, which encourages the concentration of new facilities within and near existing recreation areas while developing and enhancing the attractiveness of points of interest in appropriate locations throughout the Delta.¹⁹¹

¹⁹¹ State Parks 2011

- Promote the creation of recreation destinations as focal points of the Delta. Such multi-interest complexes should each highlight Delta values by incorporating one or more Legacy Communities, marina resorts, public and private recreation basecamp areas, natural wildlife areas, and trails. The complexes should be based upon existing community values and highlight existing Delta and community resources.
- Encourage the creation of settings for private enterprise development through the development of ancillary public facilities such as trails, event venues, community docks, etc.
- Advocate for overnight extended stay within or adjacent to the Delta through program offerings, multiple points of interest, and available accommodations.
- Increase the public's awareness of the Delta as a desirable recreation destination through better regional coordination, advertising and signage, marketing, and promotional-scale events.
- Identify and develop appropriate opportunities for small boat-in day-use areas, as well as larger destinations akin to Delta Meadows for boaters. Such areas should provide basic facilities for boaters, such as docks, tie-ups, restrooms, as well as opportunities to participate in many different forms of recreation.
- Develop appropriate locations throughout the Delta for a network of hard-surface non-motorized, multi-use trails, as well as boat trails for both motorized and non-motorized craft, including completing planning and implementation of the Great Delta Trail,¹⁹² and trails recommendations from State Parks.¹⁹³
- Ensure appropriate and coordinated response to operational issues including exotic aquatic vegetation control, boater safety enforcement, waterway maintenance, abandoned and derelict boat removal, boating hazard control, etc.
- Provide additional on-shore access facilities for shore fishing and motorized and non-motorized boat launching.

4.5 Recreation Enhancement Strategy

4.5.1 Basic Approach

4.5.1.1 Planning Interrelationships

The Delta Stewardship Council Delta Plan provides recommendations for the Delta as an Evolving Place. Relative to this Economic Sustainability Plan, the Delta Plan recommends that “ways to encourage recreational investment along the key river corridors be identified.”¹⁹⁴ State Parks, in its recreation proposal for the Delta,¹⁹⁵ looks at the Delta and Suisun Marsh as a whole, including State Recreation Areas, wildlife areas, and other state facilities. The scope of this Economic Sustainability Plan for recreation encompasses the entire Legal Delta, with a focus on the Primary Zone, but will also include Legacy Communities, marinas, agritourism, and other private enterprise activities.

It is anticipated that the final Delta Plan, State Parks' recreation proposal, and the DPC's Land Use and Resources Management Plan may need to be refined for consistency with this Plan. Ultimately, any refinements to a final recommended action plan need to be supported by both the recreation and resident community of the Delta.

¹⁹² DPC 2010

¹⁹³ State Parks 2011

¹⁹⁴ DSC August 2011 p. 197 (Fifth Staff Draft)

¹⁹⁵ State Parks 2011

4.5.1.2 Components

State Parks' recreation proposal coordinates with and provides recommendations for each of the state agencies involved in various portions of the recreation sector in the Delta. It does not, however, provide recommendations for local agencies and private enterprises. Private enterprise presently constitutes nearly all of the economic activity related to recreation in the Delta. Therefore, this Plan examines all three sectors and the potential synergies between state agencies, local agencies, and the private sector.

4.5.1.3 Catalysts

A key strategy for achieving synergies between the public and private sectors is to plan for relationships wherein public agency facilities interrelate, complement, and create catalyst settings for private enterprise activities, while at the same time providing public services. These services can include both recreation facilities as well as vital infrastructure to support both public and private areas. Catalyst settings should be created whereby joint public-private efforts could support an expanding and diversifying menu of recreation and cultural attractions and events, as well as overnight accommodations, restaurants, retail, and other services.

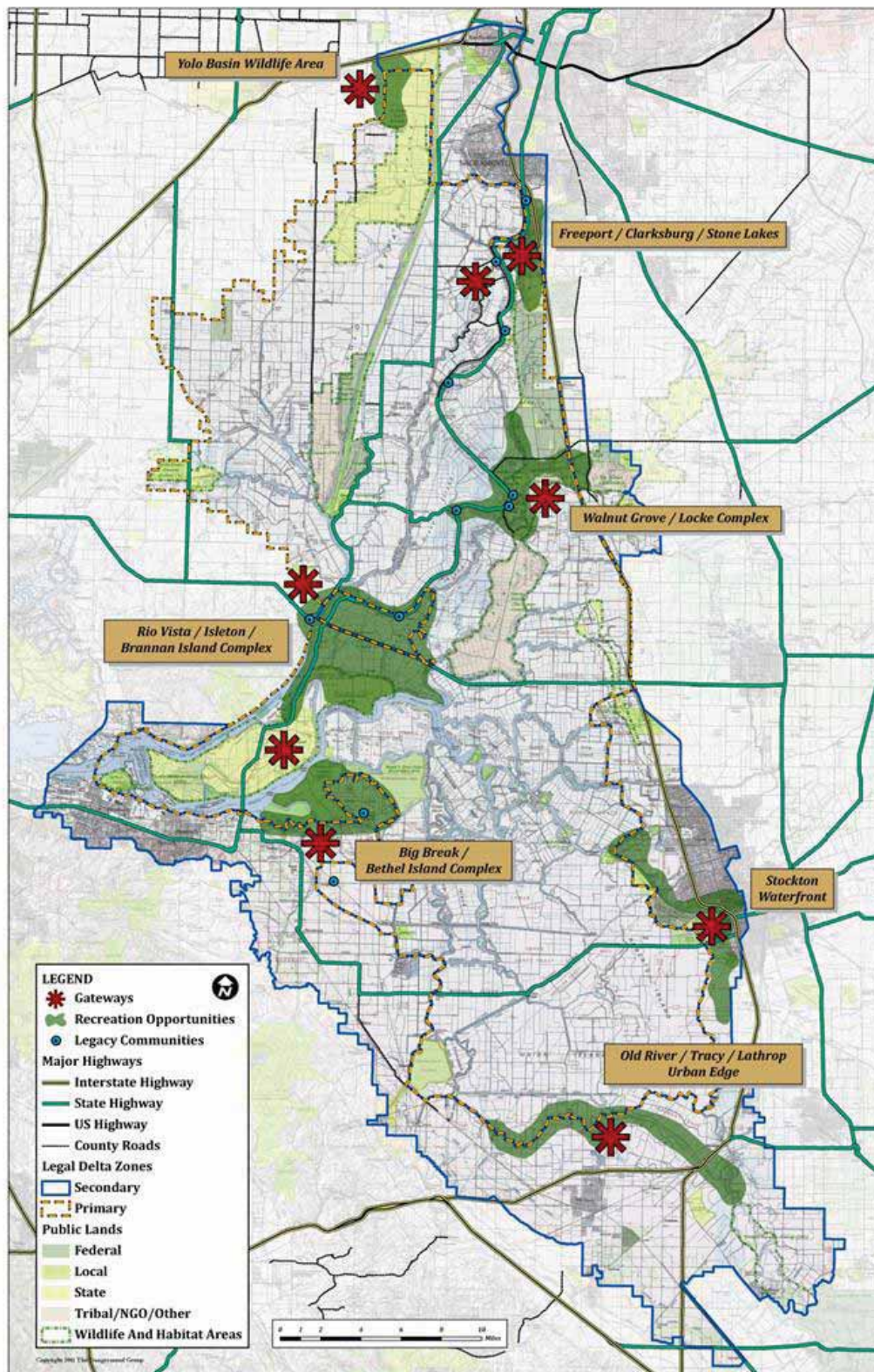
4.5.1.4 Location

Concept locations for where catalyst settings, facilities, and activities could be accomplished are proposed below. The locations are primarily focused around the edges of the Delta and in and around Legacy Communities. These recommended locations are based upon the principles and goals previously discussed, and consist of the following five concepts (See Figure 33).

1. Delta waterways
2. Dispersed, small points of interest and activity areas
3. Focal point destinations
4. Public access to existing and planned natural habitat areas
5. Delta-urban edges (the edges of existing and emerging urban areas that surround the Delta) such as Stockton, Tracy, Rio Vista, and Lathrop

Each concept and how it relates to influences and proposed locations is described in greater detail below.

Figure 33 Recreation Enhancement Strategy Plan¹⁹⁶



¹⁹⁶ For high resolution image see <http://forecast.pacific.edu/desp-figs.html>

4.5.2 Delta Waterways

The primary location for recreation in the Delta is, of course, the waterways. These waterways are diverse—narrow, wide, tree-lined or channelized, windy or quiet. Boaters have, over time, selected areas for their specialty activities such as windsurfing, waterskiing, cruising, paddling, etc. For instance, the waters flowing along the northwestern side of Sherman Island are a mecca to windsurfers and kiteboarders. Specialty needs are associated with most of these diverse activities.

The Delta Protection Commission's 2006 *Aquatic Recreation Component of the Delta Recreation Strategy Plan* is still very applicable. It recognized the existing use areas, access points, and marinas, and provided recommendations regarding their enhancement, refurbishment, and expansion. In addition, the report recommended three priority new enhancements.

It recommends that non-motorized boating trails be established in six different locations on waterways where habitat values are primary and where such use would not conflict with power-boating activities. A second recommendation is that major boat-to destinations, similar to Delta Meadows, be established in other parts of the Delta. Further study is required to determine where these might be appropriate, but four possible areas were provided. The third recommendation was that smaller boat-in day-use areas with adequate facilities and transient tie-ups be established in appropriate locations throughout the Delta. Suggested elements and features for these areas, as well as location criteria, are provided within the report, but no specific locations are identified.

In addition, the report indicated the need for continued navigability of waterways, as well as provision of new and expanded facilities in the future. These included more boat launching ramps, marina slips, boating support facilities, public access to waterways for anglers, and convenience docks related to Legacy Communities and points of interest.

The 2006 *Aquatic Recreation Component of the Delta Recreation Strategy Plan* predates the present, more comprehensive legislatively mandated Delta planning efforts. The above elements to the plan are still relevant and applicable, but some of the new influences on the Delta's evolution will require additional responses as related to Delta waterways recreation.

- The efforts of creating a sustainable, healthy ecosystem will likely create additional waterways that should be reserved for the increasing interest in non-motorized boating.
- Plans to create salmonid-friendly edges to the lower Sacramento River could influence the location of, and facilities for, windsurfing and board sailing activities in this strategic location.
- Reliable water supply facility studies should be coordinated with recreation potentials in order to avoid impacts and to potentially provide additional recreation opportunities.
- Potential risk management strategies including setback levees should be studied for possible joint use for waterway-related recreation. Such strategies may require relocations of existing access facilities and it is recommended that such relocations, if necessary, take the opportunity to provide complete, up-to-date facilities.

4.5.3 Dispersed Points of Interest and Activity Areas

The Delta's diverse points of interest and activity areas are dispersed throughout its vast landscape. These features grant the Delta a distinctive character, especially in contrast with the

surrounding urban and even rural agriculture landscapes. Overall, this aspect has come to be referred to as Delta-as-a-Place. These diverse points of interest—the small Legacy Communities, the loose network of marinas scattered throughout the area, the farm stands, wineries, and surrounding agricultural landscapes, winding waterways, and intriguing riparian landscapes—underscore the need to protect, enhance, and expand the elements that give the Delta its charm and sense of place. The sheer number and diversity of things to see and do is a valuable feature.

The expansion, over time, of additional areas will be accomplished primarily through private enterprise responding to opportunities such as farm markets, wineries, art galleries, restaurants, etc. On the public side, the Department of Water Resources¹⁹⁷ identified, in a past study, approximately 40 small day-use, launching, and fishing access locations that were economically viable, but which were never developed. State Parks has identified 13 park and facilities expansions and development.¹⁹⁸ Federal, state, and nonprofit wildlife entities have planned facilities for increasing and managing public access and use.

Policies should be developed to encourage private development of additional appropriate facilities in non-conflicting locations and funding needs to be identified to accomplish appropriate public agency-planned improvements.

4.5.4 Focal Point Destinations

An important way to expand recreational capacity, increase visitor spending and lengths of stay, and draw new visitors to the Delta is to create destination complexes, similar to State Parks' Gateway-Basecamp-Adventure concepts.¹⁹⁹ By concentrating multiple recreation opportunities in an interconnected location, these complexes would provide focal points to visitors, particularly new visitors, and also present opportunities for businesses to develop economically viable operations. These complexes should include, and build upon, the primary values of the Delta.

Three locations have been identified that already have complexes of the values of natural areas, parks, Legacy Communities, marinas, historic features, and trail potentials. They are: (1) Walnut Grove/Locke/Cosumnes River Preserve, (2) Brannan Island/Rio Vista/Isleton, and (3) Bethel Island/Jersey Island/Big Break. In addition, an emerging complex along the edges of Stockton also has the potential to be developed into a focal point destination.

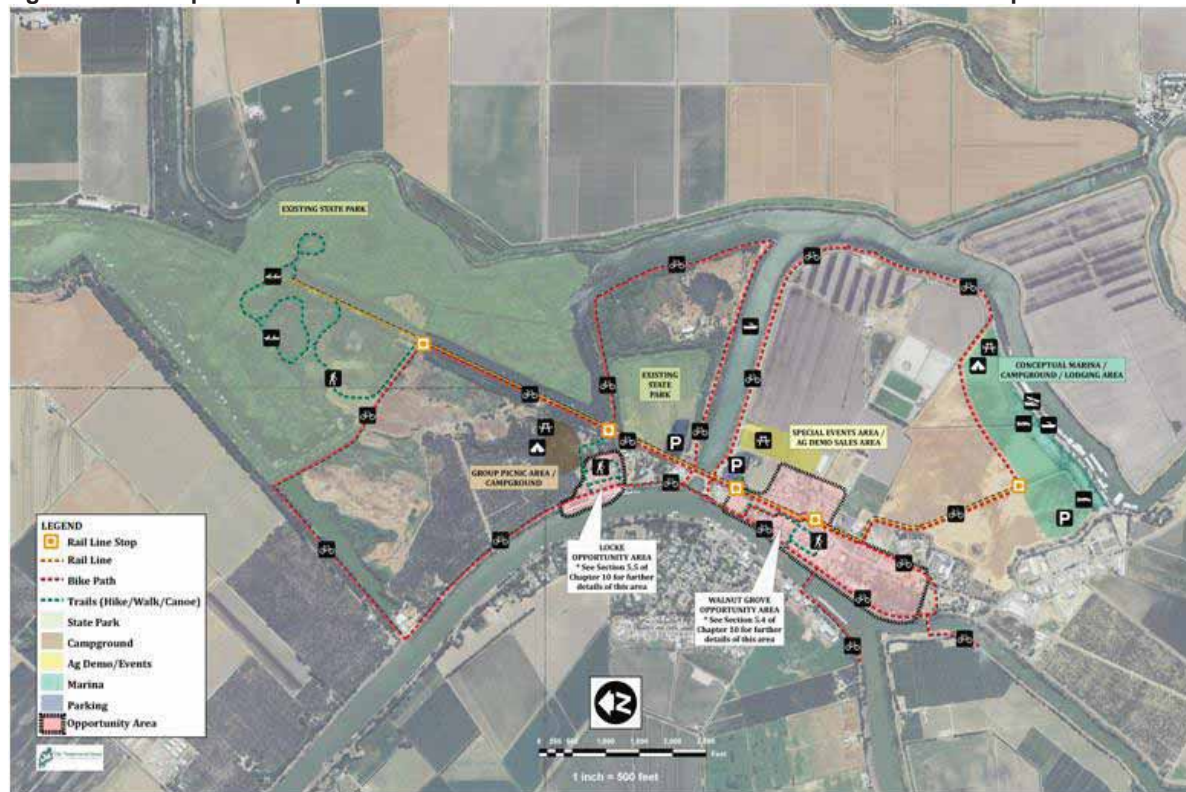
The first focal point destination is proposed to include the Legacy Communities of Locke, Walnut Grove, Ryde, Cortland, and Hood, as well as Delta Meadows, the Cosumnes River Preserve, and Staten Island. Figure 34 below presents a conceptual drawing of proposed features. Additional public facilities should include developed day-use and camping facilities at Delta Meadows, events venues, further improvements/restorations at Locke, and wildlife viewing/nature study opportunities. A network of water and land trails would knit together the complex and give it a sense of cohesion. A segment of the historic railway connection between Old Sacramento and the Delta could be used to foster the growth of critical mass at this complex, making it more attractive for investment. Chapter 10 discusses some strategies for the Legacy Communities, but additional features and activities could be evaluated to assist in creating viable settings for private enterprise operations.

¹⁹⁷ DWR 1981

¹⁹⁸ State Parks 2011

¹⁹⁹ Ibid, p. 6

Figure 34 Conceptual Proposal for Walnut Grove/Locke/Delta Meadows Focal Point Complex²⁰⁰



The Brannan Island/Rio Vista focal point destination complex is proposed to include Isleton, the emerging Delta Discovery Center and Farmer's Market, and the marina complex around the junction of the San Joaquin and Old Mokelumne Rivers. Possible habitat areas on Twitchell and Sherman Islands, the windsurfing oriented Sacramento County Regional Park on Sherman Island, and Brannan Island State Recreation Area could be knit together with the communities and marinas with a network of trails. Development of additional features to create settings for private enterprise should also be evaluated for this proposed destination complex.

The Bethel Island focal point would include its marina and existing businesses, Big Break Regional Park, and a natural-lands conversion of Jersey Island. As with the other proposed complexes, these areas could potentially be tied together and enhanced with both landside and water trails.

The proposed focal point along Stockton's edge has a different character and does not include a Legacy Community or a major natural landscape feature. The planning and emerging development for the area, however, create a Delta-related focal point area because the recent designation of the westerly portion of Wright-Elmwood Tract as open space and a possible State Recreation Area, in partnership with local agencies, provides the opportunity for additional park, trail, and habitat restoration improvements.

4.5.5 Natural Habitat Areas

The fourth location-based recreation enhancement strategy is the association of appropriate visitor access to natural habitat areas with and on the edges of the Delta. Three existing natural

²⁰⁰ For high resolution image see <http://forecast.pacific.edu/desp-figs.html>

habitat areas have the potential of providing expanded environmental education and nature-appreciation opportunities: the Jepson Prairie/Calhoun Cut area at the head of Cache Creek, the Yolo Basin Wildlife Area east of Davis, and the Stone Lakes State Park and National Wildlife Refuge. These three natural habitat areas, in combination with the previously identified focal point areas, are important assets of the greater Delta. They all have the need for improved visitor access and interpretive facilities.²⁰¹

4.5.6 Delta-Urban Edges

The final location-based recreation enhancement strategy is the establishment of Delta-serving and urban recreation areas, as well as natural habitat zones, around the edges of the Delta. These should be located between the Delta and adjacent urban areas—from Stockton around to Antioch and Bethel Island, including the north edge of Tracy and Lathrop, and in selected locations such as Rio Vista. It is recommended that criteria be developed to assist in locating this interface zone (open space corridor) generally in conjunction with existing urban limit lines, in an area that would optimize its value for habitat enhancement with active park nodes and interconnecting trails.

4.6 Baseline Visitation Potential

A market demand-based model of visitation for current conditions was developed as a baseline. This model is based on population, participation rates, activity days, and market capture rates. The same model can be used to predict visitation in the future, making adjustments to participation rates and market demand capture rates based on assumptions discussed above, as well as on general recreation trends that may influence recreation participation rates in the future, also discussed above. General assumptions for this baseline scenario forecast follow.

- Market Area population will increase by approximately 50 percent between 2010 and 2050.
- It is estimated that approximately 20 percent of the future recreation use will trend towards developed urban park-related, 30 percent right-of-way-related, and 50 percent resource-related.
- There is a trend away from consumptive recreation (e.g., hunting and fishing) and towards non-consumptive wildlife recreation (e.g., bird watching and nature photography).
- Increasing participation in agritourism is likely.
- Gas prices will continue to increase, with a responding trend towards recreating closer to home.
- Boating trends will shift towards non-motorized boats (i.e., more canoe/kayaks) in protected waterways.
- The proposed Great Delta Trail will be completed.

Based on these trends, quantitative visitor-day projections have been developed for the baseline scenario and are presented in Table 40. Note that this scenario does not represent status quo (i.e., disinvestment and stagnating visitation), but represents a conservatively optimistic perspective which includes the assumptions that follow.

- Visitation is based on overall trends described above.
- There will be increased investment to address deferred maintenance of existing facilities.
- There is enough capacity within existing waterways to capture growth.

²⁰¹ As described in Section 3.2.1.3, Stone Lakes National Wildlife Refuge is in the process of building expanded visitor-serving facilities.

- In most instances, growth in recreation activities will keep pace with population increases, with additional growth in wildlife-related, non-consumptive activities, and slowing growth in motor boating, fishing, and hunting.
- If disinvestment in facilities and stagnation continue, visitation may not keep pace with population growth, as has been seen over the past 20 years.

Table 40 Summary of Predicted Visitor Days under Baseline Scenario (in millions)

Activity Type	2010	2020	2030	2040	2050
Resource Related	7.6	8.3	8.9	9.5	10.0
Right-of-Way/Tourism Related	2.1	2.4	2.6	2.9	3.1

If the proposed plan is implemented, additional visitation is predicted to occur beyond baseline. General assumptions from the principles outlined above for this plan implementation scenario forecast follow.

- All activities increase slightly in the Delta due to implementation by an operating facilitating organization in marketing and promotional special events and festivals.
- An additional increase in Legacy Community and tourism, related to focal point development focused around the communities.
- Additional increases would be realized due to habitat conservation and increased levee protection.

4.7 Economic Potential

4.7.1 Recreation Spending

Based on a quantitative framework, estimates have been made of potential future recreation levels and associated spending in the Delta. As discussed above, recreation participation trends and Delta competitiveness over the next 40 years were considered. Again, the baseline forecast assumes that resource quality and recreational facilities are maintained such that the Delta retains its current level of competitiveness as a recreation destination.

Under the baseline scenario, recreation visitation in the Delta (including resource-related recreation, ROW recreation, and tourism) increases by roughly 3.4 million visitor days, or about 35 percent, over 40 years. Assuming that current visitor spending patterns remain unchanged and Delta business growth accommodates recreation-related spending increases, baseline visitation growth is estimated to increase spending in the Delta by roughly \$78 million (2011\$) to about \$329 million (2011\$) by 2050. Under the plan implementation scenario, recreation visitation and associated economic impacts in the Delta (including resource-related recreation, ROW recreation, and tourism) would increase over baseline.

4.8 Key Findings

- When attracting visitors and expanding recreation access to waterways and landside recreation improvements, potential negative impacts on agriculture from increased tourism and recreation can be minimized by focusing recreation uses and activities through expansion of existing recreation sites, development in Legacy Communities, creating buffer areas adjacent to agriculture, and increasing public safety enforcement.
- The future growth of recreation in the Delta consists of five location-based strategies which would emphasize:
 - Delta waterways, specialized by boating type;

- Dispersed, small points of interest and activity areas such as marinas, farmer's markets, wineries, restaurants;
 - Focal point complexes such as Legacy Communities or Bethel Island/Jersey Island/Big Break;
 - Natural habitat areas; and
 - The edges of existing and emerging urban areas that surround the Delta such as Stockton, Tracy, Rio Vista, and Lathrop.
- If resource quality and recreational facilities are maintained such that the Delta retains its current level of competitiveness as a recreation destination, baseline forecasts for visitation show increases of 3.4 million visitor days, or about 35 percent, over 40 years. If this Plan is implemented, recreation visitation in the Delta could increase beyond baseline.
 - Assuming that current visitor spending patterns remain unchanged and Delta business growth accommodates recreation-related spending increases, baseline visitation growth is estimated to increase spending in the Delta roughly \$78 million (2011\$) to about \$329 million (2011\$) by 2050. Plan implementation could increase the economic impact of recreation over the baseline.

5 Impact of Policy Scenarios

Four possible policy scenarios are qualitatively evaluated as to their primary elements and their potential positive and negative influences on recreation for purposes of discovering major areas of potential concern.

5.1 Policy Scenarios Influences on Recreation Potential

5.1.1 Assumptions Under All Scenarios

In Chapter 6, different policy scenarios were presented on which to base analysis for future economic impacts. Although not explicitly discussed, it is assumed that the purpose of any of the scenarios other than the baseline is to achieve the stated purpose of the Delta Reform Act and that the policies would achieve the coequal goals of water conveyance and habitat protection. Thus, under all scenarios, it is assumed explicitly as follows.

- Water quality in the Delta will improve overall (though salinity intrusion may still be a factor).
- Fisheries will be improved.
- Any project will be mitigated appropriately (suggestions to follow in later sections) for potential significant impacts to recreation, the Legacy Communities, and the economic sustainability of the Delta.
- Water exports from the Delta will continue.

5.1.2 Isolated Conveyance Scenario

In Chapter 6, the Isolated Conveyance Scenario was described and included the following features.

- Five new water intakes would be built along the Sacramento River between Clarksburg and Courtland.
- A new forebay would be constructed near Courtland where water from the five intakes would be collected and then pumped into an isolated conveyance pipeline under the Delta, extending to a new afterbay near the Clifton Court Forebay.
- Land would be removed from agriculture uses for the intake-pumping stations and the forebay and afterbay.

- Approximately 8,000 acres of agricultural land would be utilized in Sacramento and San Joaquin counties.

This scenario would affect existing and future recreation uses in a number of ways, some potentially positive and others negative, including the following.

- Since the water intakes would be upstream from the confluence of the Sacramento and San Joaquin rivers, it is expected that salinity in the water at the confluence of the two rivers and further south will increase. Water quality would decrease in the resulting relative stagnant waterways. This change in water salinity and quality will likely affect fishing, boating, and hunting in the lower Delta.
- The pumping intake stations will introduce an “industrial” quality along approximately five to ten miles of the Sacramento River, creating significant visual impacts to this rural, scenic stretch of river. In addition, the sound and night lighting related to these facilities will change the setting of the existing Legacy Communities. Together these features will reduce the Delta-as-a-Place character and the value of the Delta as a tourism destination.
- Moving the intake of fresh water to the north will likely have a beneficial effect on fisheries by allowing a more natural outflow of the remaining water out to sea. This move could improve fishing in parts of the Delta.
- It is unknown how the loss of agricultural lands would affect hunting opportunities, based upon long-term land use of the lands needed for construction.

5.1.3 Habitat Conservation Scenario

The habitat conservation scenario was described in Chapter 6 with changes resulting from the following project elements.

- More frequent flooding and improved fish passage along 22,000 to 48,000 acres in the Yolo Bypass with the intention to improve fisheries
- Creating approximately 10,000 acres of new floodplain along the San Joaquin River using setback levees
- Restoring tidal marsh habitat on up to 65,000 acres in agricultural land throughout the Delta
- Natural Communities Protection, including converting 8,000 acres of rangeland to natural grasslands, restricting 32,000 acres of agriculture to “wildlife friendly” practices, and converting 700 acres of rangeland to vernal pools and alkali wetlands
- Restoring approximately 20 miles of channel margin along North Delta waterways through setback levees and shallow water habitat

The number of potential influences on future recreation from this scenario may include any of the following.

- Creating the larger acreage (50,000± acres) of tidal marsh at the south end of the Delta could have devastating effects on salinity in the South Delta, as well as create strong currents in the channels leading to this area. Both would have significant impacts on boating and fishing. In addition, likely changes to agriculture lands could reduce hunting opportunities.
- Specifics regarding channel margin improvements are not described. Most of these impacts can be avoided or mitigated through appropriate design. Potential conflicts could arise from reducing or eliminating windsurfer access, creating use restrictions on other forms of boating, eliminating State and county park facilities with access to the river, and restricting shore fishing.
- The conversion of agricultural lands to habitat could decrease hunting opportunities if farmland conversions are of lands also used for hunting.

- Details regarding the San Joaquin River floodway are not described. If adequate in width, it could accommodate natural vegetation, trails, and recreation opportunities similar to the American River Parkway. If limited in carrying capacity, it could be restrictive regarding these recreation elements as is the Yolo bypass between Davis and West Sacramento.
- Wildlife viewing/photography and paddle sports and other nature-associated recreation will likely be positively influenced, if restored habitat areas also include public access facilities.
- Yolo Bypass fisheries amendments may negatively impact existing hunting clubs in the area.
- Increased fishing will likely occur due to better fisheries.
- Boating overall could increase with increased habitat and water quality.
- Camping would increase to support increasing nature-related recreation, if new sites and successful synergies can be established.

5.1.4 Flood Control Scenario

The flood control scenario was described in Chapter 6, with two general possibilities:

1. Flooding six central Delta islands: Webb, Venice, Empire, Mandeville, Medford, and Quimby, and leaving them in open water
2. Increasing levee upgrades, including levee upgrades around the Legacy Communities

The number of potential influences on future recreation from the flooded-island scenario may include the considerations listed below.

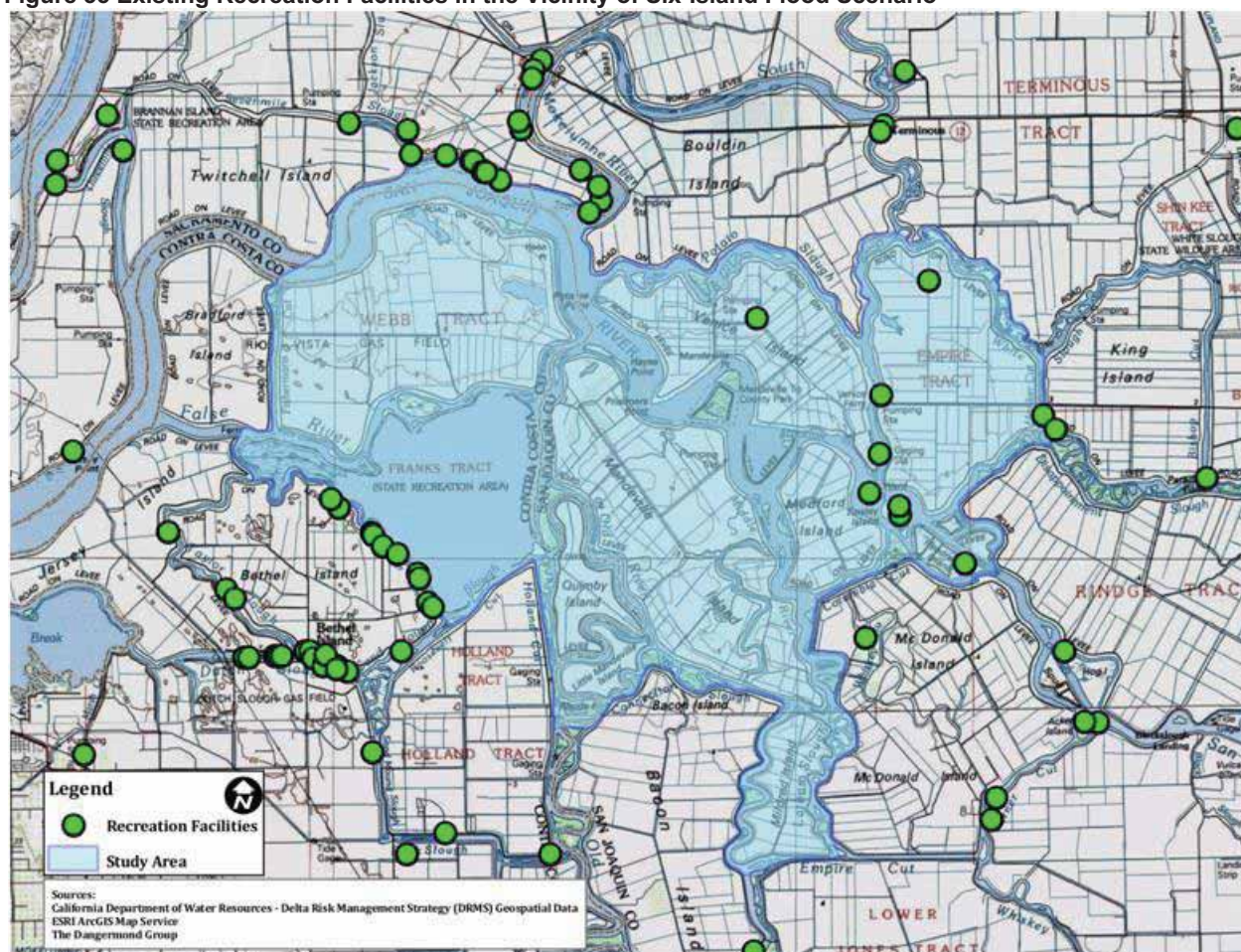
- The winding, protected, freshwater channels and waterways are the primary appeal of the Delta to boaters. Substituting a large open body of water at this proposed location will severely affect the existing boating use, and have very little offsetting use. The existing uses in this area are fishing, water skiing, personal watercraft use, speed boating, house-boating, cruising, and, to a limited degree, windsurfing.
- While a large open body of water would have severe negative effects on all these users, the open water area could arguably be more conducive to sailing. There are a number of factors, however, that will minimize sailing as a potential substitute use.
 - The flooded islands, if similar to existing flooded islands, will have water hazards, snags, and partially-submerged debris, making them dangerous to less knowledgeable boaters.
 - Most Delta boaters are from the Bay area, where sailing is far superior and closer with many adequate local marinas which, at present, are not fully occupied.
 - Those boaters in the Sacramento metropolitan area who enjoy sailing are primarily berthed at Folsom Lake, which has more favorable winds and higher water quality than found in the six-island area.
 - Sail boat densities on the water are lower than motor boat densities.
- Approximately 40 percent of all the marinas in the Delta are clustered around or near this potential area and another 5 percent are along the San Joaquin River from Pittsburg to Antioch. These marinas are also, on average, larger than those in other parts of the Delta. The resulting negative impact to the largest single recreation activity in the Delta could be very severe. See Figure 35 which overlays existing marinas and recreation facilities over the six-island flood scenario.
- This open water will have unknown changes to fisheries, which will affect anglers.
- The elimination of hunt clubs on those islands will reduce hunting.

The increased levee upgrade scenario may have a number of potential influences on future recreation, including the following impacts.

- Better protection of marinas, allowing investment in facilities

- Increased protection of Legacy Communities, resulting in more right-of-way/tourism activity
- Unknown changes to fisheries

Figure 35 Existing Recreation Facilities in the Vicinity of Six-Island Flood Scenario²⁰²



5.1.5 Regulatory Changes Scenario

Proposed regulatory changes are not known at this time. The following potentials could have a negative effect on recreation.

Increased Regulation

- Regulations against water, sewer, and building developments would make it difficult for both existing and new enterprises to locate within the Delta or to respond to changing market demands. These restrictions could adversely affect park expansions, marinas and related resorts, Legacy Communities, wineries, and direct sale of agriculture products, most likely creating further stagnation in recreation and tourism visitation.
- Blanket prohibitions against further development within the Secondary Zone could have an unfavorable influence on the park and recreation values around the edges of the Delta.

²⁰² For high resolution image see <http://forecast.pacific.edu/desp-figs.html>

- Continuing and/or increasing restrictions and regulations on dredging and vegetation controls in and around marinas could have severe negative influences on such recreation providers.

Decreased Regulation

- The reduction or removal of land use, historic preservation and agriculture protection regulations could affect the scenic values of the Delta and subsequent tourism use.

5.1.6 Policy Scenarios Influences Summary

Table 41 presents a summary of predicted potential influences to recreation and tourism by the policy scenarios described above, with range estimates of potential impacts to visitation in 2050, as compared to the baseline scenario presented in Section 4. These predictions reflect a combination of data and professional judgment of the researchers, and are intended to provide a general sense of the expected scale of the impact relative to current levels. Note that these impacts are presented in relationship to population growth, so a “Flat” trend would keep pace with population growth, while “Increase” would grow faster than population. “Decrease” would grow slower than population and may or may not represent an actual decrease in raw numbers of visitor days.

Table 41 Predicted Trends in Major Recreation Categories under Policy Scenarios Conditions

Activity Type	Policy Scenarios				
	Isolated Conveyance	Habitat Conservation	Flood Control – Six Islands	Flood Control – Increased Levees	Regulatory Changes
Resource Related					
Boating	Decrease	Increase	Decrease	Flat	Decrease
Fishing	Flat	Increase	Decrease	Flat	Decrease
Hunting	Decrease	Flat/Decrease	Decrease	Flat	Flat
Wildlife Viewing/Outdoor Photography	Flat	Increase	Flat	Flat	Flat
Camping	Decrease	Increase	Decrease	Flat	Flat
Right-of-Way/Tourism Related	Decrease	Flat	Flat	Increase	Decrease
Urban Parks Related	Flat	Flat	Flat	Flat	Decrease
Overall	Decrease	Increase	Decrease	Flat	Decrease

- The isolated conveyance scenario could lower recreation spending in the Delta.
- The habitat conservation scenario could increase recreation spending in the Delta.
- The six-island open water scenario could lower recreation spending in the Delta.
- The increased levee scenario could increase recreation spending in the Delta.
- The increased land use restrictions scenario could lower recreation spending in the Delta.

The probable future condition of the Delta will not, however, occur as a result of a single policy scenario, but of necessity, will be a combination solution. Among these various scenarios, there is an opportunity to avoid the largest potential negative impacts and to emphasize positive solutions.

5.2 Impact Analysis

This report has analyzed existing recreation uses and projected a baseline forward to 2050. It also has analyzed the negative and positive influences to the baseline from various elements of proposed scenarios. Analysis has also been made of actions that could be taken to increase recreation visitation over the baseline, or to mitigate for some unavoidable impacts. The Recreation Enhancement Plan outlined in this report describes such actions. The following

summarizes the largest potentially negative future impacts and the possible positive influences to economic sustainability for recreation in the Delta.

5.2.1 Negative Impacts

Of all the potential negative impacts, our analysis indicates that the following five items are the most significant. They are listed in order of magnitude. These major items are most likely significant enough that major changes to the project would be required, rather than simple mitigation measures.

1. *Regulation Changes.* If increased and burdensome land use regulations prohibited most or all permits for remodeling or constructing commercial and recreation facilities, they would have the largest negative impact on recreation use in the Delta. At best, it would bring growth in recreation to a standstill in all but hunting and wildlife viewing/outdoor photography. It is quite likely that an actual decline in recreation levels would occur as facilities continue to age and become out of date.
2. *Six-Island Flooding.* As previously described, the purposeful flooding of the six islands, basically north and east of the existing open water area of Frank's Tract, could result in a major reduction of boating in the Delta. Over 50 percent of the Delta's marinas are located within or in close proximity to this area, and would suffer both direct and indirect negative impacts. Boating, fishing, hunting, camping, and tourism-related activities are all anticipated to be negatively affected.
3. *Salinity Increases in the Central and South Delta.* This possibility is based upon the concern that an isolated conveyance which removes all export water at the north end of the Delta will create increased water stagnation and salinity in the central and south Delta. If that occurs, it would affect boating, fishing, and camping.
4. *Large Tidal Marsh in South Delta.* A large-scale tidal marsh area in the south Delta would likely increase salinity and strong currents in the waterways leading to the south Delta. It would affect boating and fishing, and may impact hunting due to the loss of agriculture properties jointly used for hunting.
5. *Intake and Pumping Stations—Clarksburg to Courtland.* These pumping stations, if placed along the river at this location, could seriously impact the Delta-as-a-Place recreation and tourism. This is one of the primary entry and destination areas in the Delta; the industrial scale, noise, and night lighting could transform its character.

In addition, there are other lesser impacts as previously described. These can most likely be mitigated through careful planning.

5.2.2 Positive Influences

There could be positive influences to recreation within future scenario predictions. Specifically, three elements of certain scenarios would likely have the most positive influence on recreation use.

1. *Fishing Enhancements.* The various fishery enhancements proposed in the habitat conversion and isolated conveyance scenarios are expected to help restore fisheries, and thereby elevate fishing use.
2. *Wildlife Viewing/Nature Study.* The proposed expansion of natural preserves and wildlife-friendly agriculture would increase the opportunities for wildlife viewing and nature study.
3. *Delta-As-A-Place Enhancement.* The increase in wildlife viewing opportunities will likely have a synergistic effect on the Delta-as-a-Place visitation.

6 Implementation Strategies

There are a number of key strategies that should be utilized in order to assist in the implementation of the recreation portion of the ESP. Some of these strategies and actions are described below. Many could be funded through the Delta Investment Fund or Delta Conservancy Fund.

6.1 Consistency and Regulation Refinement

Consistency refinements between the Delta Plan, the ESP, State Parks recreation proposal, and local city and county plans may be necessary after the adoption of the Delta Plan. In addition, specific plans may be required for recreational areas along with regulation refinements to facilitate implementation of their development. Priority for specific plan development should be given to two focal point areas, Walnut Grove/Locke and Rio Vista/Isleton/Brannon Island, because of their Delta-wide catalyst and branding potentials.

6.2 Public/Private Coordination and Partnerships

Nearly all recreation opportunities in the Delta are provided by private enterprise and are dependent on basic public investments in roadways, levees, and other infrastructure improvements. Public investment in synergistic recreation improvements can expand services to the public while creating settings for additional or expanded private facilities. Such coordinated action will be important in facilitating actions within Legacy Communities and edge communities, as well as with dispersed recreation points throughout the Delta.

6.3 Multi-Agency Coordination

Developing and expanding the major recreation complexes recommended in the ESP require cooperation and coordination between two or more agencies, which can forge unique relationships with those communities bordering the Delta. For example, coordination of Delta protection limits and urban limit lines can facilitate the creation of Delta buffering park/open space/trail areas. State and local park agencies can form joint powers authority to aid in implementation of development in other areas. A JPA may allow appropriate coordination and a more expedited implementation schedule.

6.4 Strategic Levee Protection

Obtaining adequate flood protection is of the utmost importance in order to foster additional meaningful economic activity in the Delta. New and improved levees are necessary to encourage new investment and reinvestment in the Legacy Communities and recommended recreation areas. Strategic levee enhancements and/or the construction of ring levees in order to protect key assets should be carried out using any existing or new funding sources.

6.5 Delta-wide Marketing

Among the opportunities and constraints discussed previously is the lack of a Delta brand or overall marketing strategy. The average potential visitor has to overcome a number of barriers in order to recreate in the Delta: it is hard to see “the Delta,” there’s no main entrance or focal point for information and activities, and facilities are sparse, spread out, and hard to access. The California Trade and Tourism Commission (CTTC) places the Delta in the Central Valley (as

one of 12 travel regions CTTC promotes throughout the state) rather than promoting the Delta as its own unique travel region.²⁰³

As early as 30 years ago, 41 economically feasible recreation improvements, studied by the Department of Water Resources, were not developed because of the lack of an entity that could be responsible for their care. As a part of this report, major recreation improvements have been identified that could stimulate visitation and economic benefits. A responsive, Delta-focused public recreation, planning, development, and management facilitator organization is vital to accomplishment of such a program. To be effective, this organization needs an assured funding source that can be relied upon for both development and operation. The organization also needs to have the authority to assist in marketing the Delta, to facilitate actions by private enterprise, and to assist with, or manage, the operation of state and local recreation facilities. This organization is discussed further in Chapter 11.

6.6 Financing Strategies

There are several steps outlined above that need to occur before development of any new major recreation areas described in this Plan can occur. Each step, including ensuring consistency among plans, developing specific area plans and streamlining regulations to accomplish them, levee enhancements, as well as organization, administration, development and operation, all will require funding and will take time. Concurrent with this planning, however, there are several recommended strategies that could be initiated as soon as funding could be made available, and which would all affect positive economic changes within the Delta. Several suggestions follow which could affect many different areas and services.

Agritourism/Legacy Communities

A “Delta farm trails” should be established to market the farmer’s market, direct sale, wineries, and related Legacy Community businesses. A grant could be provided to an existing Delta-wide nonprofit to develop brochures, marketing, and a signage program, and to help willing farms with necessary improvements. These farm trails could be joined and co-marketed with existing wildlife viewing programs and opportunities.

Department of Boating and Waterways

Additional funding could be provided to the Department of Boating and Waterways existing programs to remove abandoned vessels, combat invasive species (including water hyacinth, *Egeria densa*, and South American Spongeplant (*Limnobium laevigatum*) (with accompanying authorization to treat), and develop more waterway access for fishing and boating, including non-motorized boating access and community convenience docks. Funding also could be provided to DBW to create designated boating and canoe/kayak water trails, including planning, and developing access points, as well as additional grant and low-interest loan funds to allow private enterprise upgrades and development.

Department of Parks and Recreation

Immediate funding could be provided for State Parks to complete planning and development of Delta Meadows State Park, with connections to Locke and other heritage and natural resources in the area. Additionally, planned²⁰⁴ upgrades to Brannon Island could be completed, with funding to allow the park to remain open. Additional funding could be provided for further

²⁰³ The twelve regions are North Coast, Shasta Cascade, Gold Country, San Francisco Bay Area, Central Valley, High Sierra, Central Coast, Los Angeles, Orange County, San Diego, Inland Empire, and Deserts. <http://www.visitcalifornia.com/Explore/>

²⁰⁴ State Parks 2011, p. 22-23

implementation of recommendations in the *Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh*.²⁰⁵

Delta Protection Commission

Funding could be provided to DPC to match federal funds for initial implementation of the NHA, if it is recommended and approved. Funding could also be provided for planning and implementation of beginning segments of the Great Delta Trail, especially those segments on existing public lands.

Delta Conservancy

Funding to the Delta Conservancy Fund would allow the Conservancy to offer grant funding to local agencies, nonprofit organizations, and private entrepreneurs which provide recreation and tourism services in the Delta. These funds could be used to improve visitor centers and services at natural habitat areas, make Gateway entry improvements, and expand visitor service offerings.

Local Governments

Funding could be provided to local governments to enable them to participate fully in ongoing planning processes. In addition, designated funds could allow counties and cities to dedicate staff to entitlement processing or creating one-stop permitting centers for the Delta. It could also allow local governments to participate in a Delta-wide economic development process or a JPA.

6.7 Key Findings

- Possible policy scenarios are qualitatively evaluated as to their primary elements and their potential positive and negative impacts on recreation.
 - Scenarios evaluated may affect recreation visitation by either decreasing visitation or increasing visitation over the baseline scenario, with the expected largest potential for negative impacts from increased regulatory changes or the six-island flooding and the largest potential for positive impacts from the habitat conservation scenario.
 - Visitation changes would also affect recreation-related spending in the Delta, as compared with the baseline forecast. It is anticipated that the magnitude of these potential changes is smaller in magnitude than the potential economic impacts to the agricultural economy.
 - The largest anticipated potential negative impacts would result from regulation changes, six-island flooding, salinity increases in the central and south Delta, creation of a large tidal marsh in the south Delta, and intake and pumping stations near Clarksburg and Courtland.
 - Positive impacts could result overall through project enhancements to fishing, wildlife viewing, and nature study, and Delta-as-a-Place.
- A significant operational constraint for future growth in recreation demand is that there currently exists no Delta brand, overall marketing strategy, or significant-scale focal point area. An existing organization should be designated as a Delta recreation and tourism marketing and economic development facilitator.

Recommended Implementation Strategies include consistent planning and regulation refinement, public/private coordination and partnerships, multi-agency coordination, strategic levee protection, Delta-wide marketing, and financing.

²⁰⁵ Ibid, p. 22-24